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Farm Department.

Conducted by J. H. Brown, who lives on his farm at Clinax, Mich., which is conducted as the Michigan Farmer Experiment Farm. All correspondence for this department should be sent to Clinax, Mich.

THE EDITOR'S FARM NOTES.

A HANDY GRANARY.

While testing a herd of cattle, in Hillsdale Co., recently, for tuberculosis, we found the granary shown at Fig. 1. A sketch was made by the owner's son, C. M. Smith, and we append a brief description:

The building may be of any required size, and should be high enough to allow good-sized bins above the second floor. In this case the second floor is slightly above the top of the roller-door track and cap. A strong, hard-wood frame, mortised and tenoned together, supports this granary. There are plenty of nail ties, and the outside covering will resist all the lateral pressure the grain in the bins can exert. The roof is covered with steel.

BINS ON SECOND FLOOR.

There are four large square bins above that have a combined capacity of 2,000 bushels. These are well supported underneath by cross timbers.

A door opens under the roof, at A, into the elevated platform B. From this door a narrow floor is so laid, running lengthwise of the building, and over the bin partitions, so that wheat or oats may be emptied by gravity into any one of the four bins.

THE ELEVATOR.

This is shown at B, and is elevated by chains and compound pulleys. The supports for the hoisting apparatus are shown at C. A set of 12 pulleys is used. The platform frame is made of hard wood, and the platform itself is sided up about three feet from the floor. The elevator is hoisted by horse power, one pulley being attached to the ground, and the chain D running through.

POWER REQUIRED.

One team, attached to the chain D, can easily elevate 60 bushels of wheat at each draft. The bags are shifted from the wagon onto the platform, elevated, then slid along the narrow floor and emptied into the bins.

This is a handy granary, and a good plan for elevating, when the structure stands on level ground. Were we to build one on our own farm, we could run a short trestle to an adjoining hillside. Then a hopper should run from under the granary roof on a level track to the end of the trestle. The load of grain could be emptied into the hopper and quickly run under the roof. A slide and lever attachment would permit of emptying into any bin required.

BEST WAY TO CUT CORN.

In reply to recent queries we will state that we prefer to use the one-horse, four-wheel, corn harvester, with safety shafts and safety seats attached. In our opinion this is the best and cheapest method of cutting corn, on farms where from 10 to 40 acres are yearly grown. For filling a silo, the

corn binders would be preferable, as we look at it.

Our one-horse machine is run to and fro across the field at right angles to the rows of shocks. Six rows in width (along the shock row) are put into each shock. In cutting with the harvester, we drove the horse through between the two center rows (that is, between the third and fourth rows across the field). When the shock row was reached we let the horse go on, just far enough so the two operators could step off and stand their two big bundles of corn just back of the harvester, and in the center of the shock row. These two bundles were tied with a single, limber stalk. The butts being well spread, there was no danger of the shock tipping over. The next time back we cut the two rows on the south side of the shock, and the re-

turn plan of cutting with a one-horse machine is well shown in Fig. 2. (See page 118.) A B, represents machine; C, where horse is attached; D, location of shock when six rows are put in one row of shocks. Arrows show path of machine in turning at each end of field. Ten short rows are indicated by large dots.

For The Michigan Farmer.
COMMERCIAL FERTILIZERS.

A PRACTICAL EXPERIMENT ON WHEAT.

Being desirous of testing the value of commercial fertilizers on wheat, I last fall purchased 500 pounds of a complete fertilizer and applied it to the poorest two acres in a nine and one-half acre field. The conditions were as follows: Soil, gravelly loam upon which clover seed had been lost for a

total yield by weight of the unfertilized strip, 32½ bushels per acre.

The two acres fertilized cut 67 dozen bundles, or 33½ dozen to the acre, and threshed out one bushel of wheat to every 11 bundles, or 73¼ bushels, thresher's measure, weighing 64 pounds to the bushel. This made the total yield by weight of the fertilized strip 39 bushels to the acre.

It will be noticed that with the same size bundles it took 11 of the fertilized and 11½ of the unfertilized to make a bushel; and that with the same measures the fertilized weighed one pound more to the bushel. The financial account stands as follows:

Extra yield per acre, 6½ bu. at 65c.....	\$4.25
Cost of fertilizer per acre.....	2.75

Profit per acre.....	\$1.50
Oakland Co. A. C. BIRD.	

For The Michigan Farmer.

A SUBSTITUTE FOR HAY.

In figuring on the corn crop of the future, it will be necessary to take into consideration the feeding value of the cornstalks. We have already realized the truth of the prediction made by some years ago, that corn would soon take the place of grass for dairy and cattle feeding. With some progressive dairymen, pasturing is already considered out of date; it is a wasteful method, and waste of any kind is almost criminal. Hay may always be in demand in the cities for feeding horses. But it is a serious question whether corn is not a good substitute for it.

Hay is inferior to cornstalks for feeding purposes, and now that we can supply perfect corn ensilage for feeding we have no particular need for the pasture fields. We should plant the crops that will yield the most to the acre, and then we observe economy in its highest sense. It is just as much waste to raise something that will produce less than another crop as it is to destroy something already produced. Hence for dairying purposes we need to raise corn instead of grass. An acre of pasture will not supply much more than one-fifth of the food required to support a cow through the growing months. One acre of corn will give the cow all the food she needs from the first of July to October. The difference is apparent.

Corn gives more nourishment to the cows and cattle than pasture; it yields better returns upon the labor involved in planting and harvesting it. On the same piece of land corn raised for silage will make four times as much green food for a cow as grass will. The ensilage is better liked, will give better results, and is cheaper than the dry fodder which we call hay. The ensilage can be kept all through the winter and spring, and fills in the space completely between the harvesting of the corn until the new crop grows the following summer.

In this new system of feeding we cannot entirely abandon clover. This is a crop that is essential to the maintenance of the fertility of the soil. A

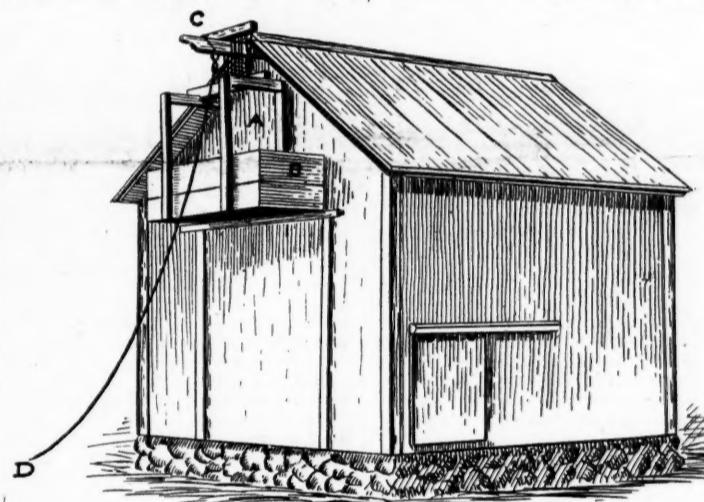


FIG. 1.

maining two on the north side. Three times across the field thus cut six rows of corn, and completed one row of shocks. Each shock contains 108 or 114 hills, making it quite large and thereby saving more of the fodder from spoiling by exposure.

AN IMPROVEMENT.

This is a decided improvement over the old way of cutting. We can cut very much faster and easier. The only objection we had to the machine was that it persisted in pulling up an occasional hill. We commenced cutting around the outside, at first, without sharpening the knives. They bothered very much, and we were somewhat inclined to be disgusted. But after the knives were sharpened the machine worked very much better.

Another thing we found out from experience was, that we could cut better and easier when the horse walked fast, and at a steady gait. We also found that it was much easier to cut the corn that was blown over and lodged than we anticipated. In fact, the corn harvester has come to stay.

NO DANGER.

There is no danger in riding and cutting corn when going down a hill, if not too steep, for the machine has safety shafts attached. When a very steep slope is reached, we stop the machine and cut the corn by hand.

number of years. Tillage, well summer fallowed, the entire field being treated exactly alike except in application of fertilizer. Variety of wheat, Red Clawson. Date of seeding, September 10th. Cost of fertilizer and applying same, \$5.50 or \$2.75 per acre.

RESULTS: But little difference could be seen until November 1st, after which time, however, the fertilized strip could readily be picked out from the darker color and stronger growth of the wheat. In the spring the difference became quite marked. An interesting feature was that the clover germinated on this strip several days earlier and on May 22d was decidedly thicker and larger on the fertilized strip. Shortly after this, however, the grasshoppers destroyed the clover in the entire field and stripped the growing wheat of its leaves.

The wheat in the fertilized strip headed three or four days earlier and more evenly. At time of cutting, July 2d, this strip was slightly riper, straw no taller, but thicker on ground and heads better formed.

Yield: The 7½ acres unfertilized cut 223 dozen bundles, or 30 dozen to the acre, and threshed out one bushel of wheat to every 11½ bundles, or 23½ bushels, thresher's measure, weighing 63 pounds to the bushel. This made

crop of it should be raised every season, and it will serve as good food until the new corn crop is ready. All of the rest of the pasture land should be plowed up and planted with corn. Give the fodder corn a chance to grow and develop; it should not be cut or fed until the ears are partly formed. In this way a dairyman gets more for his labor and land, and in the end makes more money.

New Hampshire. W. E. FARMER.

For The Michigan Farmer.

CLOVER AND SOUR SOILS.

It very often happens that a failure to secure a good stand of clover is due to too much acidity in the soil, or to what may be called a sour soil. Where green crops have been plowed under for several seasons, this very often happens. Green rye plowed under is apt to make many soils sour. It is almost impossible to make clover catch well on such a soil. The best thing to do is to top-dress it with slacked lime, which has a very beneficial action in correcting the acidity. It certainly does not injure any soil, and it does good sometimes to soils that we least expect would be benefited by it. Owing to the good effect the lime has upon some land, farmers have been led to classify it as a fertilizer. But it is not really a fertilizer. There is nothing in the lime that adds plant food to the soil, but it tends to free from the soil just what the plants need to thrive on. Lime has been applied to soils to nourish plants where the land did not contain enough lime necessary for the proper development.

But this is incidental to the question of raising a good crop of clover. If the clover will not catch well on the soil, an application of lime to one corner of the field will quickly determine whether it is due to extreme acidity of the soil. If the clover does no better the next year after the lime dressing, it may be safely concluded that the trouble is not due to a sour soil.

The clover root borer is another nuisance that makes it almost impossible in New York to raise two good crops of clover. There is little difficulty in raising one fine crop, but that is about all. Where two crops can be raised it pays to cut the first crop early for hay, and let the second crop get a good start early in the summer. On ordinary soil I do not think it necessary to plow clover under, for it seems to me that the roots and stubble furnish all the plant food required by the soil. If the second crop will not get high enough to cut for hay, it will furnish good pasture for cows, sheep or pigs, and these animals, if not pastured in too large numbers, do little injury to the roots. The sheep rather do the clover good by compacting the sod and burying the roots deeper.

The question as to whether clover ever sours the land has been raised many times. I believe where very large succulent crops are raised, two seasons in succession this will always occur, and that the only remedy then is to dress the soil with slaked lime at the rate of 25 bushels to the acre.

New York.

C. W. JONES.

LOOSE SMUT OF WHEAT.

The season just passed seems to have been unusually favorable to the development of fungous diseases. This is especially true with reference to the loose smut of wheat and oats. Owing to this fact, numerous inquiries have come to the station, in regard to some method for its prevention.

At present it is well known that the loose smut of wheat and other cereals is caused by a minute fungus, which enters the plant while very young and lives inside its tissues, developing its fruit or spores in the head of the growing wheat, thus development taking place at the expense of the wheat kernels themselves. The spores as they ripen are carried by currents of air to adjoining plants thus infecting the seed for the coming year, or they are washed off by rains into the soil, where they may also infect the next season's crop. In this connection it is well to observe the following precautionary measures, which will mitigate much of the loss: 1st—That the seed shall be taken from wheat fields free from smut. 2d—Sow on soil not previously infected with smut spores.

Treatment of seed.—Since the plants are infected by this fungus in the very early stages of their growth, it is evi-

dent that no treatment of the plants in the field will prevent the development of the smut, hence the necessity of treating the seed. The ordinary hot water treatment, as recommended for the stinking smut of wheat and the loose smut of oats has not proved an efficient preventive of the loose smut of wheat, hence it has not been employed by the station to any extent. A recent bulletin (U. S. Department of Agriculture, Farmers' Bulletin No. 75), by Swingle, however, prescribes a method of hot water treatment for the loose smut of wheat, which it is claimed has proved efficient. This method which is to receive a thorough trial at the station this coming season is as follows: "The seed enclosed in coarse gunny sacks or open baskets, is soaked for hours in cold water. It is then removed and allowed to stand in the wet sacks, about four hours. The enclosed seed is then dipped in a vessel containing water at 110 to 120 degrees Fah., and after a moment it is lifted, allowed to drain a little and then dipped again. This operation should be repeated several times. The object of this preparatory treatment is to bring each seed in contact with the warm water, and the whole time consumed should not exceed a minute. The sacks of seed should then be plunged in water at 132 degrees Fah., for five minutes, care being exercised in maintaining this temperature within a degree or two throughout the operation, as well as to keep the seed con-

tinued room for wheat, and sheep for cattle; to the Charolaise race, succeeded the purest Durhams. The estate is well subdivided, supplied with roads, and plenty of water. The rotation is mangels, oats sown with clover; clover, then wheat, the latter followed by an intercultural crop of velvet vetches or silo maize. The meadows are superb, and liming is practiced. Wood, wheat and cattle are the only outputs sold. The farm offices are fitted up with every convenience and the silo is in sections of solid masonry, capable of filling to 150 tons. Machinery is employed wherever practicable. The mill grinds the grain to feed the hands; it does more; it enables the bran to be added to the inferior wheat to form rations for the stock. Since six years it is with bread that M. Petiot fattens his bullocks. He keeps only the purest Durham blood; some twenty cows and forty bulls and oxen. He has carried off many of the blue ribbons at the Paris cattle shows. His daughter photos all the pick of the sheds, and these form a kind of herd book. At some miles distance M. Petiot has another estate, forty acres of which were a vineyard; he lost all his vines by the phylloxera while experimenting with every rational remedy. Ultimately he tried the grafting of American stocks; result, the creation of a new vineyard, and of one of the best brands of white Burgundy wine in his region.

The Hispano-American war is affecting French agriculture peculiarly. In

precaution he ought to adopt, since the law for the repression of manorial frauds can be so easily evaded, to avoid the drummer intermediaries of unprincipled dealers. The farmer has only to order his supply through his syndicate, or demand from the ministry of agriculture the list of honorable dealers in fertilizers.

C.

Feed and Ensilage Cutters.

Farmers who make a profit in dairying or in feeding and fattening stock for market make the largest gains when carefully measured and well balanced rations of wholesome and nutritious foods are given. But one must not look for complete success unless these foods are well prepared and carefully preserved. Those who have fed well preserved ensilage are generally satisfied with the results.

Heebner's Crushing Attachment for Fodder Cutters.

cured and it is very evident that silage has come to stay. There are many, however, who do not have a silo. To such persons it will be interesting to know that well cured and well preserved fodder, when properly prepared, will produce equally as satisfactory results as silage.

The chemist at the Indiana experiment station, after making exhaustive tests, has pronounced well cured fodder "the most valuable of all the agricultural side products, and equal in feeding value to good timothy hay." Says further, "about one-half of the total feed in the fodder is found in the portion of the stalk below the ear."

At the Missouri station dry fodder for cows proved more effective than silage. At the Illinois station heifers fed on dry fodder made practically the same gain per pound of dry substance consumed as

when fed on silage. Thus it will be seen that in dairying and in feeding and fattening stock for market it is absolutely necessary, if the best results are to be secured, and due economy practiced, that farmers and dairymen purchase feed and ensilage cutters. One of the very best machines on the market is Heebner's Union—the '97 model. This machine is not surpassed as an ensilage cutter. It is convenient for the operator, very strong and durable, light running and rapid in execution. As a dry fodder cutter it is superior to other machines in that it has an attachment to crush and soften the heaviest cornstalks, making them sweet, palatable and nutritious through the operation of crushing the sugar from the stalks. A shredder attachment is furnished which can be operated at half the speed and with half the power of other shredders. Made in all sizes, from small hand power machines to very large machines for heavy steam engines Catalog with illustrations, full description, etc., sent free on application. Address Heebner & Sons, Lansdale, Pa.

The Eclipse and Fairbanks Windmills.

No well regulated stock farm now ever thinks of getting along without a good windmill; and as one travels over the western country he sees them dotted here and there, and in fact on almost every farm, which demonstrates how necessary these mills have become in recent years. There is no reason for anyone becoming dissatisfied with the operation of a windmill, providing proper caution is taken to buy of a reliable firm, and to buy a mill that is guaranteed to do all that is claimed for it. It is essential when buying a windmill that the wheel be constructed in a suitable manner to withstand the strain of heavy storms, and that it will perform the work which is intended for it. In reviewing the make-up of different mills, we notice many superior points in the "Eclipse" made by Fairbanks, Morse & Co. of Chicago. Over 50,000 of them are in use. This was the first solid wood

wheel built, and with improvements has kept easily in the lead of wheels. It is unsurpassed by any kind, and users always recommend it. The "Eclipse" wood wheel will last as long as any other part of the mill. One owner who is enthusiastic over his wood "Eclipse" writes that his mill has been in constant use for seventeen years, pumping from a 75-foot well, and at a cost during the entire time of \$1.50 for

repairs. The mill is adapted either for pumping or power purposes. Then their "Fairbanks" steel mill has made for itself many friends. The wheel of this mill is made of cold rolled steel, reinforced at the upper end of each sail by being corrugated. This insures them against being broken or bent at times of severe storms. The sails are curved on a special roll and given additional strength by a slight twist in them. By thus changing the angle of the sails to the line of wind in proportion to the speed of sails at any given point between the center and circumference of the wheel, they discharge the wind evenly and greatly increase the power of the wheel. The arms are flat steel and shaped so that they thoroughly brace each other. This makes a wheel which is powerful and runs in a light wind and cannot be twisted, dished or bulged out of shape. Write Fairbanks, Morse & Co., Chicago, for printed matter.

Ten-Day Low Rate Excursion, Mackinaw-Petoskey & Alpena via Michigan Central.

Special excursions to Mackinaw City and Alpena will leave Detroit via Michigan Central at 7:30 a. m. Aug. 24th, and for Petoskey, Traverse City and Charlevoix at 7:20 a. m. Aug. 25th. Very low rates. Call or write Michigan Central agents for full information. Excursion rates will also be made from other stations.

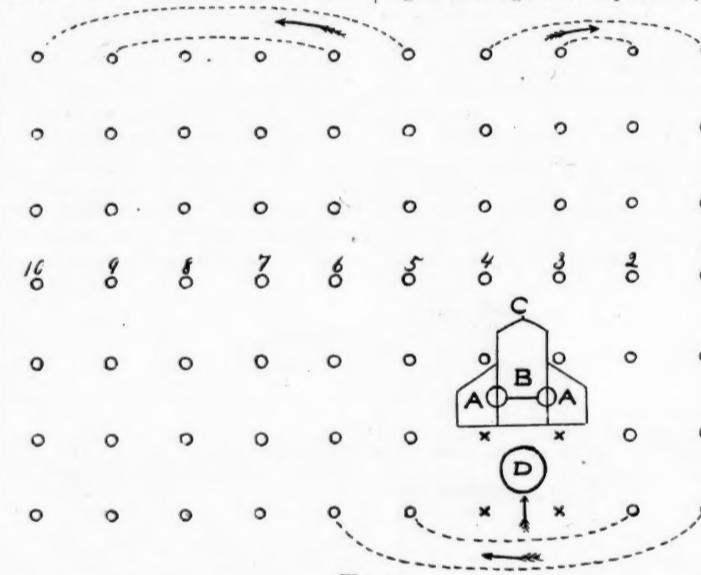


FIG. 2.
stantly stirred. To maintain the temperature it is necessary to have a third vessel containing boiling water, by the addition of which to vessel No. 2 a uniform temperature may be maintained. The thermometer used should be an accurate one.

It has been found that quite a percentage of the seed is killed by this treatment, hence it is recommended that one-half more seed be used per acre in planting.—William Stuart, Assistant Botanist, Purdue University Experiment Station.

NOTES ON FRENCH AGRICULTURE.

In the department of the Saone-et-Loire, there is no name better known and more respected than that of M. Emile Petiot among advanced farmers. At Lourdon he has a farm of 1,500 acres that he has reclaimed in the heart of a desert wilderness. Today it is an oasis, and for a second time he has been awarded the diploma of honor for the successful all-round management of his holding. Since generations his family belong to the locality, but it is only within the last thirty-five years that the farm in question has been taken in hand. He has a vineyard and an estate also in the region. He reclaimed the 1,500 acres, which are of gneiss and granitic formation. The farm represents now all the modernism the best science could desire, and it is a profitable investment, so practical men are answered while being invited to imitate the example. Some 1,100 acres are planted with larch and fir trees, to supply wood to mines and combustibles to Paris bakers; 250 acres are under arable culture, and the remainder are managed on the metayage system—a division of profits between landlord and tenant, after deduction of regulated expenditure. The land was made arable gradually, by attaining a higher culture as the soil became richer; rye

a few weeks hence, the farmers will be preparing to sow winter cereals, so the question agitated is, Will it pay, seeing the price that superphosphates have so suddenly attained, to employ them as fertilizers. Florida was the chief centre of production of mineral phosphates till the outbreak of the war; that event gave life and impetus to the phosphate beds of Algeria, whose owners at once ran up prices. Let us cast a glance, retrospectively, on the employment of natural phosphates in agriculture. That brings us back to 1842, the period when Sir J. Lawes commenced the transformation of the superphosphate. The production of scoria or slag dates only from 1886, when Sir Thomas Gilchrist revolutionized the fabrication of steel, and with such happy and unexpected results for cultivators. At the commencement of rendering the phosphoric acid soluble by the addition of sulphuric acid the price of the former represented one franc per kilogram, or nearly 5d per lb. As the supply of the phosphates increased the price of the phosphoric acid fell to 40 centimes per kilogram, or 1½d per lb. It remained at that tariff from 1890 to 1895. Then the wheat and sugar beet cultures became sick and custom dues failed to bring relief. There was a glut of phosphates, and the price of the phosphoric acid—the unit factor of the superphosphate—dropped to 1½d per lb in 1897. It was America supplied the European factories with the mineral phosphate; the outbreak of the war suddenly cut off the supply, when Algeria stepped in with the mineral 30 to 40 per cent higher. Hence, why the phosphoric acid is to-day 2½d per lb in the mineral phosphate, a price unknown since 1888 to 1890. Other phosphates, as slag for example, followed the rise; its phosphoric unity is about 4½ farthings per lb. The farmer can hence see what it will cost him to phosphate his wheat, and to cull from his experience, the surplus yield of grain consequent on the use of the fertilizer. One

The Horse.

CONDUCTED BY ROBERT GIBBONS.

Address all correspondence to Michigan Farmer, Detroit, Mich.

SHETLAND PONIES.

In the United States Shetland ponies are generally looked upon as only fit for children—they are never taken seriously. The American boy has no desire to see them regarded otherwise. To him they are a possession to be longed for, and thoroughly enjoyed when once acquired. But the Shetland, in his native home, is a business horse—small, to be sure, but fitted exactly to his surroundings, as nature always fits her products. The Shetland Islands, from which these miniature horses take their name, are a group of bleak islands on the north coast of Scotland, where one wonders why people will live while this great big earth contains such beautiful countries. Perhaps if there were no Shetland ponies there would be no inhabitants on the Shetland Islands. These islands belonged to Norway in the age of the Vikings, who used them as a base from which to attack the exposed shores of Great Britain, Ireland, and the continent of Europe. They finally passed to Scotland in lieu of a dowry for a Norwegian princess who married a Scottish king. The inhabitants, however, still claim descent from the ancient Norsemen, and observe many of their old customs. Their only modes of making a living are by fishing, and the cultivation of a few grains, such as oats, which can be grown on the islands. The inhabitants are naturally a tough and hardy race, excellent sailors, inured to hardship, and living frugal lives. The ponies furnish the only means of transportation on the islands, and are as hardy as their masters. Underfeeding and hard work are undoubtedly responsible for their small size, and, bred under different conditions, fed well and working but little, there would surely be an increase in size from generation to generation. To guard against this the Shetland Stud Book excludes those which are above a certain height. There are only about 600 produced annually on the islands, and these are sought after by buyers from all over the civilized world. In Scotland, these ponies are employed in coal mines to draw coal to the shafts when mined. Their small size, great strength and hardiness peculiarly fitted them for this work. But they have become too valuable now, and this work is given to ponies of mixed breeding from Iceland and northern Scotland, while the Shelties are sent to other lands to delight the boys and girls who are lucky enough to get them.

Several herds of the ponies have been established in this State. At one time John P. Sanborn, of St. Clair Co., had a large herd, which were finally sold to a Californian. Then the late James M. Turner established a herd on his farm near Lansing, and they proved a very paying investment. They were allowed to run like a bunch of sheep, and it was a great sight to see the little matrons of the herd, with their tiny progeny, trotting around the pasture fields. There are a couple of breeding herds yet in the State, and quite a number scattered through other states.

Here is a description, taken from the London Field, of the Shetland as he appears in his native home, which shows how necessary he is to the business and comfort of those who live in the bleak islands which are his early home:

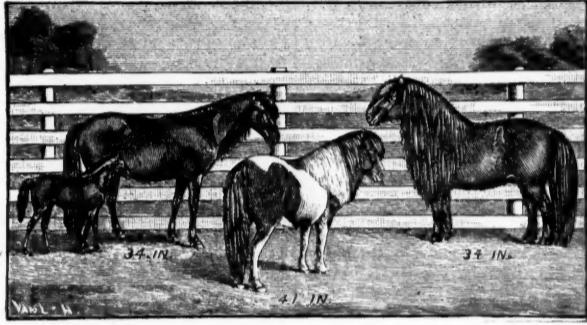
The ponies are not an agricultural but a domestic necessity. In Shetland, as in parts of Ireland, every family depends for its supply of fuel on peat, and as the peat is seldom found near at hand to where the houses stand, but on the hill behind them—there is always a hill in the rear in Shetland, every island consisting mainly of a patch or two of "smooth" land in few snug nooks by the shore—and as it is often a distance of several steep and stony miles, each house requires several ponies, the number depending on the distance and character of the road. A family living "convenient" to the peat may require only two peat-carriers and another may require half a dozen. The material, after it has been dug and dried in the usual manner, is carried home on the backs of the ponies in blankets called "cassies." It is obvious that the back that performs this kind of service must be broad and

strong. The Shetland pony is a striking example of development; for generations past he has been bred and reared and trained with uniformity which could not have been secured in any other part of the United Kingdom. Hence his physique and general character, his hereditary instincts and intelligence, his small size, and his purity and fixity of type. A pony belonging to a breed which has to pick its zigzag way down a steep declivity during many generations, must be sure footed. By the same rule a pony whose grooms and playmates include a dozen juveniles—the children of the neighborhood, who roll underneath him or upon his back—must be gentle; and the pony living on scathold or air sometimes, rather than herbage, must be hardy. The pony of the Shetland Isles is, in fact, the offspring of circumstances. He is the pet of the family, gentle as the Arab's steed under similar training. He will follow his friends indoors like a dog, and lick the platters or the children's faces. He has no more kick in him than a cat, no more bite than a puppy. He is a noble example of the complete suppression of those vicious propensities which some of his kind exhibit when they are ill-treated, and of the intelligence and good temper that may be developed in horses by kindness. There is no precedent for his running away, nor for his becoming tired or

The Jackson meeting brought into prominence quite a number of young Michigan horses, some of which will undoubtedly be heard of in the future. The Michigan sires which were prominent were Enright, Montgomery, Pilot Medium, Sphinx, Louis Napoleon, Barney Wilkes, Alphington and Ambassador. These smaller meetings are really of more importance to the breeding interests of the State than the grand circuit meetings, which are so well patronized. The small breeder has no chance whatever when pitted against the big stables of the nabobs of the track.

The Denver Field and Farm is talking up horse meat as a healthy article of diet. Here are its reasons: "Horse's meat differs from beef in being slightly coarser in grain and having a slightly richer flavor. Its quality naturally depends on the age of the animal. As a rule, even though it may be tougher, the meat is considered by some epicures to be safer to eat than beef, as they claim that cattle are each year producing among themselves tuberculous infection, while horses have little chance to communicate tuberculosis to one another. The diet of horses fits them for food purposes even more than cows and infinitely more than swine or poultry."

The American Cultivator, referring to the sensational harness performers



GROUP OF SHETLAND PONIES.

frightened, even when he has carried some laird from Lerwick to his home, many Scotch miles across the hills. He moves down the rugged hillsides with admirable circumspection, loaded pannier fashion with two heavy "cassies" of peat, picking his way step by step, sometimes sideways. In crossing boggy spots, where the water is retained, and a green carpet of aquatic grass might deceive some steeds and bring them headlong to grief, in the spongy trap, he carefully smells the surface and is thus able to circumvent the danger. In the winter the Shetland pony wears a coat made of felted hair, and especially suited to the season. His thick winter garment is well adapted for protecting him from the fogs and damps of the climate.

It is exceedingly warm and comfortable, fits close to the wearer's dapper form, and is not bad looking when new. But when the coat grows old, toward spring, at the season when the new one should appear, it becomes the shaggiest of the kind you often see. Its very amplitude and the abundance of the material, render it the more conspicuous when it peels and hangs for awhile, ragged and worn out, and then falls bit by bit till the whole of it disappears. No horse looks at his best when losing his coat, and the more there may be to lose the worse he looks.

HORSE GOSSIP.

Hamburg, the best three-year-old of '98, as he was the best two-year-old of '97, has been retired from the turf, and will hereafter be at the head of the Bitter Root Stud. He leaves the turf perfectly sound, if published statements are to be relied upon.

The Texas State Fair this year will give thirteen days' racing, with \$30,000 in purses. What the premiums on all other agricultural and manufactured products amount to we do not know, but it is safe to say the total will not be half of \$30,000. The fair is to be held at Dallas, October 1 to 16, inclusive.

More horse hides are tanned in Newark, New Jersey, than in any other place in this country. Cordovan vamps are the product. The tanners are said to get more money out of a hide than anywhere else. Three, and sometimes four, splits are made and finished. It is estimated that \$16 is realized per hide and the yearly business done amounts to \$10,000,000.

Petroleum Department.

CONDUCTED BY DR. W. C. FAIR.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case fully, also name and address of the writer. The initials will only be given. When an answer is requested by mail it becomes private practice, and a fee of one dollar must accompany the letter.

Wolf tooth.—Two-year-old colt has a wolf tooth. I am told it will injure his eyesight if left alone. W. J. A., Hillsdale, Mich.—Have the tooth extracted and do not allow any person to mislead you about wolf teeth. They are not dangerous and seldom do any harm.

Canker.—I have two lambs that have sores under their lips that prevent them from eating. They are thin. Can anything be done for them? C. F. G., Athens, Mich.—Your lambs have canker. Apply one part zonoleum to twenty parts water twice a day.

Inflammation of brisket and neck.—A cow has swollen brisket. Am unable to determine whether there is pus in it or not. The swelling extends to throat. She eats and shows no symptoms of pain. B. E. M., Davison, Mich.—Apply equal parts tincture arnica, extract witch-hazel and alcohol three times a day. Give half an ounce nitrate potash twice a day in feed.

Serous abscess.—Young horse has a large swelling on hip. It came on very suddenly and I think it is full of fluid of some kind. J. W., Adrian, Mich.—First of all make a very small opening. Notice if blood comes from wound. If not, make a larger opening and allow watery fluid to escape and it will soon heal. Keep him in dark place away from flies and he will get better much faster.

Blood poison—Surfeit.—I have a mare that foaled in May. About a week later she broke out in blotches all over body. They varied from the size of a bean to a walnut. I gave her hyposulphite soda and she got well. Now she has small pimples. What shall I give her? W. C., Clarkston, Mich.—Your mare suffered from blood poison. Now she has surfeit blotches. Give one dram Fowler's solution three times a day. Put ounce of borax into one quart water and apply to blotches twice a day. Give sulphate magnesia to keep bowels open.

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A SUPPOSED HISTORICAL FACT.

It may be mentioned as a historical fact that previous to the war between the states breakfast bacon was scarcely heard of south of the Ohio river. Many farmers of the South now put up their sugar-cured bacon as well as their hams.

We cut that extract from the Farmers' Voice as an example of how "history" is written. We knew it was exactly opposite to the facts, and that bacon was a more general article of consumption south of Mason and Dixon's line "before the war" than at the North. But to furnish absolutely unassailable evidence of this fact we took occasion to look up the matter in the "Official Records of the Rebellion, Union and Confederate," published by the United States government. Here is an extract taken from a letter written to Col. Eppa Hunton, of the Confederate Army, by T. W. Edwards, of Leesburg, Va., giving a list of supplies that could be had in that county:

"There are not less than 20,000 cattle being grazed in the county, a large proportion of which are fat and ready for market. This is exclusive of the dairy stock, hogs, sheep, etc. There are large amounts of flour, bacon and grain of last year's growth."

The date of the letter is June 9, 1861, six weeks before the first battle of Bull Run. A letter from Albert Pike, Brigadier General in the Confederate army, dated May 4, 1862, from Fort Smith, Ark., referring to a contract for army supplies, says:

"Which gave one man the monopoly of supplying all the fresh beef and bacon for two armies."

A letter from the same party, to the Confederate Secretary of War, dated June 30, 1862, says:

"I am feeding with supplies of flour and bacon purchased in Texas."

Gen. Van Dorn, writing to Gen. Price, of Missouri, regarding a proposed Confederate advance into the latter State, under date of February 14, 1862, says:

"Flour, salt, and a little bacon in our wagons, and beef cattle driven with us, should be our commissariat."

In 1863 an order from the Confederate Quartermaster General reduced the ration of bacon from 12 to 8 ounces per day. It strikes us that if the people of the South did not know what bacon was until after the war was over, it was very foolish in the Confederate government to issue such an order. This alleged "historical fact" has not even the basis of a foundation. A good many young men think that people never knew much until they appeared on earth, but a consultation of authorities always reduces this assumption to extremely small proportions.

MILK AND BEEF FORM.

This question is discussed very ably in the Holstein-Friesian Record; and while there may be some points on which cattle-breeders will not wholly agree with the writer, the general reader will find much to think and study over in the arguments presented. The great question is whether a cow with the accepted milk form is the only one adapted for dairy purposes, and that a good dairy animal is necessarily, from its conformation, a poor beef animal. Can we have animals which are good in both directions? This writer thinks they are not incompatible:

One of the favorite theories of our times is that the nearer a cow approaches the technical milk form the more profitable she must be for exclusive dairy purposes. In order to test the truth of this theory let us in imagination place side by side a model of the milk form and a model of the beef form, and construct therefrom the milk and beef form, and see if we have to leave out anything of the former that is really valuable. To begin, we find both models have fine heads and limbs indicative of fitness of bones throughout both structures. It follows that this fitness goes into the milk and beef forms. We find in the milk form that the chine is high and sharp and in the beef form broad and flat. The latter goes into the milk and beef form. By it do we lose anything in milking ability or increase the cost of production? We think not, but rather increase the strength and vigor so essential in a profitable dairy cow. We also find that the loin and hips of the milk form are angular and comparatively narrow, while those of the

beef form are comparatively broad, smooth and level. The latter style goes into the milk and beef form, and again we ask, by it do we lose anything in milking ability or add anything to the cost of production? Those broad, strong, level hips seem to us just the best possible frame from which a magnificent udder may be suspended. We also find that the rump of the milk form is carried out comparatively narrow and angular, while that of the beef form is broad, smooth and level to the extremity. The latter style goes into the milk and beef form and once more we ask, by it do we lose anything in milking ability or add anything to the cost of production? Certainly not, for the pelvis is just as roomy or more so than in the milk form; this is the essential thing at this point in a superior milch cow. Passing downward we find the twist open and roomy in the milk form, close and full in the beef form. The former goes into the milk and beef form. We also find the lower part of the hams light in the milk form and heavy in the beef form. Again the former goes into the milk and beef form. Passing forward we find the milk form has loose, thin shoulders, a light brisket, and a comparatively narrow chest, while the beef form has a broad and deep chest, a heavy brisket and broad, thick, compact shoulders. Neither of these styles go into the milk and beef form, but rather a medium between the two. The shoulders are smoother and more compact than in the milk form, but much lighter in weight than in the beef form, as also is the brisket. The chest is not so deep as in the beef form but the width through at the heart is retained. A degree of strength and vigor is thus obtained that is not found in the milk form. Only one more essential thing remains to be described. In the milk form the abdomen is swung low and its sides are steep and flat, while in the beef form it is no less capacious, though trimly held up and round. The latter style goes to complete the milk and beef form. And as we have repeatedly asked in regard to other parts, by it do we lose anything in milking ability or add anything to the cost of production?

The stomach and other organs have just as much room and their activity cannot be diminished in the least by this style. And it indicates great constitutional vigor. We venture the assertion that more than half of the superior dairy cows of our country, if classified according to their structures, would be included in this milk and beef form. And in all countries where dairying is carried on extensively, the same would be true. The dairy Shorthorns of England are of this form, the Brown Schwytzers of Central Europe are of this form, and the great majority of the dairy cattle of Holland, Belgium and Northern France.

STOCK NOTES.

The fight over Clever's Model is still raging among western breeders of Poland-Chinas. The question of whether that hog is living or dead seems to be as unsettled as the old-time one of who struck Billy Patterson. There is one thing sure, and only one, so far as we can learn, and that is, that someone is doing a fearful amount of lying. We are not prepared to say who it is.

A breeder in the American Swineherd gives the following as a sure remedy for sore mouth in pigs: Get a pint of linseed oil, and put five cents worth of oxide of zinc into oil. Shake this well, put a little carbolic acid in also. Apply this once daily for a few days. This was used in my first experience with sore mouth, and they had it bad before I commenced treatment, so bad that a person could see the effects of the cankers for several weeks after they became well.

A correspondent of the Swineherd says: "Since the issuance of the premium list of the Illinois State Fair for 1898 there has been complaints from many swine breeders that no provision was made for the exhibition of fat swine." Perhaps the compilers of the list thought the breeding stock generally shown is fat enough to answer all purposes, and there was no use making extra classes.

There is a great percentage of the hogs coming to this market that are too young and unfinished to bring a fair price. Many of them show good breeding, and with a month or six weeks' feeding would bring the top

market price. Perhaps the owners had to sell them for some good reason, but they should go on to some other farm to finish up before they go to the packer or butcher. It looks like poor economy to sell such hogs, especially while the market is as low as at present.

Prof. Thos. Shaw, in discussing improved stock, truly says: "We have delicacy in some of the improved breeds. This would not exist had they been universally reared on proper principles. Where breeds are delicate man has made them so. Nature never makes such a mistake. They have been made delicate because man has been carrying too far the idea of the largest profit for the food consumed. Some of our breeds are also somewhat shy as breeders. This is also the work of man. Nature produces all or nearly all animals so that they will breed regularly when she cares for them. Man, by his improper modes of management, makes them shy breeders."

In his last letter, our Paris correspondent says: "The outbreak of foot and mouth disease continues. France, in order to prevent any extension of that malady from external causes, commenced to apply rigorously the sanitary laws relating to disinfection of cattle trucks. Three disinfectants are employed: one part of bichlorate of mercury in 1,000 of water, with 5 parts in 1,000 of muriatic acid; second, 1% pints of hypochloride of soda with 8 pints of water; and third, 10 per cent of quicklime dissolved in water. The litter is to be removed from the wagon; the latter well scraped and flushed, and when dried apply the disinfectant. The cost is fixed at the rate of 40 centimes or four pence per horse, 30 per ox, down to one centime per sheep, lamb, or goat. No foreign wagon suspected to have conveyed diseased animals will be allowed to cross the frontier till completely disinfected; if a truck arrives with any stock diseased, all will be sent back."

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THE TYPE OF SHROPSHIRE SHEEP TO BREED.

BY HERBERT W. MUMFORD.

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A great many, I might say the majority of Shropshire sheep breeders go on year after year, some satisfied, some dissatisfied, with the low prices which they receive for their stock, while they are envious of other breeders who receive prices which they think ought to make the breeder speedily rich. Low prices received by a majority of our Shropshire breeders are traceable to many causes, but chief among these, it seems to us, is that they are not producing what pleases the man who has money with which to buy.

Is it not to our interest as breeders to take a careful survey of our situation and see if better stock would not be a panacea for nearly, if not quite, all of our seeming discouragements? Since we are breeders of Shropshires we must ask ourselves whether we are producing typical Shropshires or not.

When we study this question we are confronted with a greater, viz., What is a typical Shropshire? At first thought we say nearly every breeder has a different ideal, but upon careful consideration we believe we are safe in saying that our best breeders are quite generally agreed upon the leading points of excellence, and are striving to produce a sheep which will conform as nearly as may be to that ideal.

It was with the thought in mind that a plain statement and a full description of the points of excellence of the Shropshire breed, as now recognized by the best breeders, might be of service to a large number of breeders who are just entering the ranks, that we consented to prepare this paper.

We must recognize in a discussion of this nature that the type of the Shropshire has changed considerably since the breed first became generally known, and there is a possibility of still further change and improvement, although of course the improvement in the future can not be as marked or rapid as it has been in the past. When we look at the best specimens of the Shropshire breed to-day and compare them with those of ten years ago we marvel at the improvement wrought, not only in grace and beauty of outline, but also in actual usefulness as producers of mutton and wool. This brings us to an important consideration, viz.: breed type and mutton type. In breeding Shropshires these days we must do more than grow a sheep which will produce a large amount of mutton.

Every breed of sheep worthy of recognition as a distinct breed has a quality, a character, separate from that of every other breed. The breeder of any pure bred race of animals recognizes that he must give much attention to what is spoken of among stock breeders as breed type. Oftentimes the difference between a sheep selling at \$50 and one selling for \$10 lies largely in the fact that the one conforms to the breed type and the other does not. It is sometimes argued that conforming to breed type means nothing more than the catering to "fancy points." However, if we are honest with ourselves and the breed we represent, can we not see how many of the so-called points of excellence of the breed have grown out of some breeder's fancy? They are now recognized as valuable points. Strictly speaking, I suppose, every so-called point, the fixation of which as a characteristic of a breed, should have its origin in its ultimate usefulness to the producer and consumer. True it is sometimes difficult for us to say that some certain characteristic points of Shropshire sheep which have been developed, it may be from the fancy of some few breeders, are of any commercial value, and yet fashion is a strong factor in the markets of to-day in every department of the commercial world, and, other things being equal, that breeder who pays most attention to breed type, without sacrificing or impairing the usefulness of the animals, is most successful.

And suppose the sheep produces no more wool or mutton by possessing some point which adds grace and beauty of form and carriage, must we as breeders banish from our midst all

thoughts of sentiment and beauty? Must we content ourselves with producing an animal which yields a heavy fleece and a good leg of mutton?

I believe we can well afford, and will get on better as breeders, if along with the utilitarian idea we couple thoughts of beauty and attractiveness of form and fleece. Sure it is we shall be more pleased with our stock, we will love them more, and our success as breeders is somewhat dependent upon the amount of affection we have for our animals. But there is an economic side to this problem. There is growing up in this country a large class of wealthy men who are buying and stocking their farms with pure bred stock in order to satisfy a taste for the attractive features of rural life which capital can afford. These men buy animals which please the eye, and after all they are not so different from other men. If you are successful in producing an animal which pleases the sense of sight of your customer you have gone a long way toward making a sale.

It is important that Shropshire breeders agree on a standard of excellence as they have already done, and every breeder should thoroughly understand those points. This done, he should strive to breed animals which conform as nearly as possible to that standard. If Shropshire breeders would everywhere strive toward this end, there would be greater uniformity in the Shropshire type. We must not overlook the fact that the future success and popularity of the Shropshire breed in America and in the world rests in a large measure upon the ability and intelligence of breeders to maintain a uniform type. What we want is all Shropshires of a uniformly high grade of individual excellence—uniformly good. We feel like urging this important point further, for with popularity and wide distribution of a breed some stock is sure to fall into careless hands, and in time will be condemned as valueless or of inferior worth.

Ordinarily speaking, "The Type of Shropshire Sheep to Breed" is that type which commands the highest price among breeders in the United States, Canada and Great Britain.

SHROPSHIRE BREED TYPE.

If a sheep conforms to the Shropshire breed type it will, with all the rest, be a typical mutton sheep. On the other hand, let us bear in mind that a sheep may have a typical mutton type without the typical Shropshire breed type. As breeders of Shropshire sheep, is it not imperative, therefore, that we consider, first of all, those points of marking, size and form, which characterize the typical Shropshire?

General Appearance.—Pleasing to the eye, stylish and graceful carriage, symmetrical form, fleece dense, legs short, massive appearance. By general appearance we refer to general make-up of the sheep as a whole, and the impression made upon the mind from a hasty examination. The characteristics of the Shropshire type will be discussed in detail in their proper places.

We must ever keep in mind, in breeding Shropshires, that they are pre-eminently a mutton sheep. First of all, then, in a cursory glance we should look for a low, massive mutton type form. For a proud, stylish carriage. A well-rounded symmetry from one end of the animal to the other. In a general way, and without a close examination, look for the fleece to be dense, for the head and legs to be partially or wholly covered with wool.

Size.—The item of size in a sheep is about the first that appeals to the casual observer, and so to the expert judge often couples with his idea of a particular breed a characteristic size. A mature Shropshire ram, in good breeding flesh, should weigh from 200 to 250 pounds. A mature ewe, in good breeding condition, from 130 to 175 pounds. One thing we must banish forever from our minds is the idea that the size of an animal is the measure of its value for breeding purposes. I believe it a mistake all too common in America to select for large size rather than fine quality.

In giving the above weights we have departed somewhat from the standards laid down by some authorities, yet we believe, after careful consideration, the figures are as nearly correct as can be given. In our opinion, a mature Shropshire ram weighing less than 180 pounds, in good breeding condition, is much too small. On the other hand, when a Shropshire ram exceeds 250 pounds in working flesh, he is getting

too heavy to be typical. We do not want to approach too closely the Southdown type on the one hand, nor the large Hampshire and Oxford types on the other. We have selected a breed which in size is between the two, let us in the future preserve this size as characteristic of Shropshires, leaving those who want a larger or smaller sheep to seek them in other already well established breeds. The Shropshire, with its present size, has supplied a demand in the market which, in our judgment, will continue to be a strong and permanent feature of our future mutton trade.

When we have satisfied ourselves that the general appearance and size of an animal is of such a character as to warrant a closer examination, we should examine carefully the head and neck. Almost inseparable from these is the constitution of the animal.

Head and Neck.—Perhaps no other point or part of the sheep contributes more to the general breed appearance of the animal than the head. If the head is typical, many other defects are often overlooked. If, on the contrary, the head is not typical, the observer is apt to be very careful in scrutinizing each detail. In studying the head we should observe particularly the covering of wool over the head, the color of the face, the size, carriage and color of the ears. The color should be dark brown; avoid both a very black face and one with a tendency to be light cinnamon in color, or in any way spotted. The legs should be of the same color when not covered with wool. There should be, too, a distinct difference in the style of the neck on a ewe and a ram. It is a well known fact that the best meat type animals have short thick necks. Yet we should not forget that a somewhat thinner neck, and consequently one which appears somewhat long, is permissible in a ewe where it would be a glaring fault in a ram.

(Concluded next week.)

For The Michigan Farmer.

SHEEP NOTES.

There is scarcely a crop, if any at all, that will pay better for sheep pasture than a small patch of rape, if a person does not see his way clear to sow any considerable acreage. As a rule it comes at just that time of the year when the pasture is the poorest. In fairly good soil it is almost surprising the amount of fodder that can be grown on an acre.

As a rule opinions will differ as to the best method of putting it in. For the past two or three years we have sown a small amount without any intention of cultivating it; judging from what I have been able to observe, it seems as though it would be much better to put it in drills and then give it a fair amount of cultivation. I have noticed that when rape is sown broadcast, as a first crop of the year and not as a successor to another, that where the ground is reasonably fertile the rape has little or no trouble to get the start of the weeds and soon smother them out, but where conditions are different, perhaps nothing more than the effects of dry weather, the weeds are the first to start and will keep the advantage throughout the season. I have noticed small lots that were drilled something after the manner of beets, and a moderate amount of cultivation was kept up during the season, that the growth of forage was abundant, fully equal if not better than would have been the case if the crop had been broadcasted; besides the weeds were kept down entirely.

Where one sows rape in some other crop to come on after the first is removed the circumstances are quite different, and the probabilities are that drilling would be entirely impractical. The conditions are dissimilar because it is presumable that the crop which the rape is to follow, supposing it is corn, has been reasonably well cultivated so that the weeds are more or less entirely removed.

Rape is an excellent forage crop for sheep, but some care must be observed in turning a flock upon it as it is liable to have the same effect as clover on cattle when they are allowed to partake of it too freely. Two or three instances have come under my observation where a little indiscretion has led to disastrous results.

* * *

It is a fact to be regretted, but none the less true, that much the same difficulty exists among sheep as among

other classes of domestic animals, that is, the breeding stock and the show sheep are, seemingly, two quite distinct features of sheep culture. When one looks at the matter from a purely economic point of view, it is difficult to see just why this should be a fact. Not long ago while talking with a local sheep breeder, I asked him if he were intending to exhibit at the State fair; his answer was in the negative. He could not show for a variety of reasons: His ewes were not up in show shape, although he had been getting them ready for breeding for months past; his ram was not up to exhibition merit, and were he to suitably prepare him, it would seriously depreciate his value as a breeder the coming season; besides, his removal from the flock would mean later lambs another spring, and altogether the loss thus sustained alone would, in his opinion, not be compensated by the results of his trip to the fair, even assuming that he would be favored with reasonable success.

It is a matter that seems to be an undisputed fact, and which seemingly is proven every year in every prominent show room, that trimming and temporary pounds in the form of fat has fully as much to do with the way awards go as does the pedigree of the animal and its ability as a breeder to reproduce itself in its progeny. As is generally the case this condition of affairs is to the advantage of the wealthy sheep grower who, by the way, is about as apt to care fully as much for the ribbons that he is able to win as he is for the money that is necessary to gratify his desire, if not a considerable more; on the other hand, the poorer breeder who is in the business for a livelihood, and who can not afford to keep two distinct classes of sheep, one for the show room and the other for breeding purposes, is practically out of the race. It is doubtless a question that has its two distinct phases, but at the best, it would seem that the small breeder is taken at an unjust disadvantage.

C. P. REYNOLDS.

FLOCKS AND FLEECES.

According to returns received for the month of June, scab is pretty well distributed over Great Britain. Outbreaks were reported in 18 counties in England, 5 in Wales, and 2 in Scotland. The whole number of outbreaks for the month was 41, as compared with 46 for the previous month.

The colony of New South Wales contains, in round numbers, divided among the breeds as follows: Merinos, 44,250,000; long wools, 1,250,000; crossbreds, 2,750,000. Of the mutton breeds, statistics show the numbers of the various breeds to be as follows: Lincolns, 660,781; Leicesters, 575,588; Southdowns, 13,810; Shropshires, 18,240; Hampshires, 40; Romney Marsh, 10,698.

A letter from L. L. Harsh, the well-known breeder of Improved Black Top Merinos, states that a Montana sheep man has taken his entire crop of lambs, and a few ewes, also those of Messrs. Wilson, Robertson, Sawyer, Sanford, Pullman and Gould. The Harsh crop numbered 35 head. The same party also purchased 40 head from the Messrs. Whittaker of Washburn county. All the purchases were delaine Merinos. The purchaser, Mr. Henry Struck, said a good many sheep men in that State were breeding back to the Merino since the advance in wool. He has a band of 22,000 head, and wanted 400 rams. Mr. Struck had just left when an Idaho man came along, who wanted a carload of rams. We give these items as a pointer for breeders in the State to get ready for an increased demand for well bred rams for next season. The demand is not confined to one breed, but includes fine wools, as well as middle and long wools. The breeding flocks of the State should be increased and improved so this trade will continue and grow. A man from Washington was in Detroit last week who wanted 100 Rambouillet rams, but had been unable to find them.

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Grange Department.

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Address all correspondence for this department
KENYON L. BUTTERFIELD,
AGRICULTURAL COLLEGE, - - MICH.

News from Michigan Granges is especially solicited.

GRANGE CALENDAR.

The following is a schedule of dates arranged for Hon. Aaron Jones, Master of the National Grange, for August picnics in Michigan:

Branch Co., Gilead.....	Aug. 20.
Barry Co.	" 22.
Antrim Co., Eastport.....	" 23.
Ionia Co., Ionia.....	" 24.
Washtenaw Co., Ann Arbor.....	" 25.
Kent Co., Silver Lake.....	" 26.
Berrien Co., Berrien Springs.....	" 27.
Barry Co. Pomona, with Irving Grange	" 28.
Western Pomona, with Trent Grange	" 25-26.
Newaygo Co. Pomona, with Hesperia Grange.....	Aug. 31-Sept. 1.

EDITORIAL NOTES.

We hope that you have planned to go on the Michigan Farmer excursion next week, and if you do go we want you to come around and shake hands and get acquainted. There certainly are dozens of Patrons' families who can well afford to take advantage of this splendid excursion. We shall be greatly disappointed if we do not see many well-known faces, and make the acquaintance of many other Patrons whom we have never seen.

The August topic for discussion is one that every farmer will agree is very important. The government experiment stations have been in existence only ten years. Previous to that time practically all that was done in this country in agricultural experimentation had been performed by the agricultural colleges. The stations were handicapped on the start by lack of trained workers, as well as by a prejudice on the part of many farmers against anything that smacked of science or theory. Both the stations and the farmers have learned something in the last ten years. The stations are doing a grand work, which appeals to the more intelligent farmers, who in turn appreciate the fact that the stations have done, are doing, and can do for the farmers what the farmers cannot do for themselves. In our own State the Experiment Station has rapidly and continually grown in favor until to-day not only do the farmers enjoy and appreciate and take advantage of the 30,000 bulletins which are distributed nearly every month, but thousands of letters of inquiry are coming to the Station every year and are personally answered. It would be too much to say that the experiment station work is perfect or has reached the grade of efficiency which should characterize it, and we are sure that the experiment station authorities will gladly welcome any suggestions that may come from practical farmers looking toward the betterment of experiment station work; and we trust that the Grange will so intelligently discuss this question, and that correspondents will so fully report the results of the discussion, that we may glean from the discussion of this topic not only an idea of what the Granges think of the Station, but also some suggestions that will lead to better station work.

By one of those errors that will occasionally creep into a newspaper, the article in the Grange department of the last Farmer, entitled "Fresh Air Work," should have been signed by Mrs. Mary A. Mayo. Doubtless all Patrons recognized that this article came from Mrs. Mayo, and will freely respond to the appeal for the fund.

Surely the Grange cannot afford to allow this grand Fresh Air work to lag. Not only is it doing so much for its beneficiaries, but the work is becoming known all over the country and is bringing to the Grange the respect and admiration of eminent people who before hardly knew the Grange existed.

Probably Patrons noticed the good reports sent in last week and published under the title of "Pomona Granges." We wish to urge upon Pomona Grange lecturers the great importance of having Pomona Grange meetings fully reported through The Farmer. May we not have strong reports from every Pomona meeting in Michigan?

Grange lecturers will find considerable material to help them in the discussion of the August topic in this issue of The Farmer. Bro. A. J. Crosby, of Oakland county, and Alva Sherwood, of Berrien county, both contribute articles of interest on Experiment Station work. It will be noticed that a good many Granges discussed the July topic, and we have grouped the reports as received.

Owing to some mistake several dates which should have appeared in the Grange calendar in the last issue did not appear. We have tried to make the calendar for this issue correct.

GRANGE OBJECTS AND METHODS

We print below brief reports from quite a number of Granges, giving results of the discussion of the July topic. We feel that this plan of using the topics suggested by the National Lecturer has made a good beginning and we only hope that the August topic will be discussed by many more Granges and reports sent in by all correspondents of those Granges.

Cadmus Grange—Lenawee Co.—The object of the Grange is to educate and elevate the American farmer. Each individual Grange has as its object the benefit of the community socially, and should take a stand on questions that may arise, perhaps in the form of resolutions. The objects of the Grange would be attained if each Patron would take his part in the discussion, do his share of the work, and thus share the pleasure.—Deckle E. Tobias.

Fruit Ridge Grange, No. 276—Lenawee Co.—thinks that the main object of the Grange is to improve the farmer more from the mental, moral and social standpoint than from the financial standpoint.—J. W. A.

Hopkins Grange, No. 390—Allegan Co.—had an animated discussion on the July topic. Decided that the objects of the Grange are for the higher education of the farmers, and to protect their interests. The methods are to try to act in unison, to co-operate both socially and financially.—Mrs. H. H. H.

Cascade Grange—Kent Co.—is convinced that the objects of the Grange are grand. In an educational way it is to the older members what the common school is to the children. In a social way our acquaintance is extended and thus we become better informed on a diversity of subjects, and all this leads to a better womanhood and manhood. Great credit is given to the Grange by many ready speakers and debaters who got there their first lessons in parliamentary law and transaction of business.—Cor.

Stebbins Grange, No. 709.—The educational feature of the Grange is of greater benefit than the financial. Let each ponder on what is heard at the meetings. The time that children can grasp ideas begins at about the age at which they are admitted to the order. One member thought that farmers cannot get too much education for farming, and says he learns something at every Grange meeting. Another member thought that the financial gain is a great object of the Grange; another the equality of humanity, but we all agreed that the Grange is intended to help the farmers in every way and to make us better men and women. We better ourselves simply by working in unison.—Cor.

Onsted Grange, No. 279—Lenawee Co.—thinks that the educational work of the Grange is first and the social

next. To attain these objects we must attend the meetings and do our part.—Lecturer.

Bunkerhill Grange, No. 262—Ingham Co.—reached the following conclusions: The objects of the Grange are. 1. To become better acquainted. 2. By discussing the many questions to learn the needs of the farmer, and to govern ourselves accordingly. These objects may be accomplished, first by attending every Grange meeting and getting there on time, and, second, by not finding fault with suggestions made, but by advancing others judged better.—F. W. Havens.

South Jefferson Grange, No. 182—Hillsdale Co.—The object of the Grange is to educate the farmer, to interest him more and more in public affairs so that he will take a more active part in politics and in shaping legislation. The Grange must see that the office seeks the man and gives the office-seeker a back seat or no seat at all.—E. J. Nichols.

A WORD FROM A KENT COUNTY SISTER. The following is a brief extract from a paper written by Sister F. D. Saunders, Lecturer Kent County Grange, on the July topic. It contains thoughts that should be pondered by farmers, and especially Patrons. Let us emphasize, so far as we can, the sentimental, the poetic, the beautiful side of farming, for these mould character and character is the principal thing:

We have everything that can be found in the homes of any class of people, and added to that we have the satisfaction that all the boys and girls are not obliged to leave their old farm and go out into the world to earn a livelihood, but can and will stay with us; will help to make the old farm better, as well as our hearts better and more thankful that we learned in time to make the home attractive, even though it did take the dollars. And if we could rob our Declaration of all the other noble purposes this one alone would pay, "to strengthen our attachment to our pursuits," that of agriculture, to create and hold a love for our work, a desire to better understand nature's laws.

The man or woman who makes the greatest success to-day is the one who enters into the spirit of their work with an animation, with an enthusiasm, with a love for it, surprising their friends by showing the beauties of their work. I believe there are more beautiful, impressive lessons taught us in our daily labor upon the farm than in any other occupation that man can engage in, if we will but open our eyes to them. One object of our Grange teachings is to awaken people to a realization of the blessings that daily surround them.

GRANGE NEWS.

POSTAL JOTTINGS.

Alba Grange, No. 716.—July 18 six candidates were instructed in third and fourth degrees. August 2, paper by Sister Wilson, on "Objects of the Grange;" remarks by Bros. E. E. and C. E. Mills. Grange purchased six barrels of kerosene oil.—Cor.

North Adrian Grange, No. 721—Lenawee Co.—Had two applications for membership August 5. Discussed "What are the Objects of the Grange?" Decided that education and co-operation were chief objects. Our binder twine, though it came a little late, was very satisfactory.—Mrs. H. R. Ladd, Cor.

Madison Grange—Lenawee Co.—August 12 voted to appoint two members who should choose sides for a contest in the best application of Grange law, parliamentary or otherwise. The contest is to continue over six meetings. Bro. and Sister George A. Smith exhibited a beautiful Night-blooming Cereus in full bloom. Its waxy petals, beauty of form and peculiar fragrance were much admired, and a vote of thanks was tendered them for their forethought.—E. W. Allis, Cor.

Bellevue Grange, No. 134—Calhoun Co.—Held its regular monthly meeting Wednesday, August 10. The members expressed much satisfaction at the arrangement which saved them so much on binding twine. Several members who failed to be present when the matter was arranged learned a lesson from their loss. A short program was carried out and it seemed the unanimous opinion that our government would do well to leave such regions as the Philippines to other and more interested powers. The Grange voted to resume the regular semi-monthly meetings.—S. W. Gibson, Cor.

Ogden Grange, No. 660, entertained the County Grange August 4. There was a good turnout from all sections, although the meeting was held at the extreme southern end of the county. Bro. H. Moore, of Palmyra, gave an interesting speech on beautifying the farm and its surroundings. Remarks were made by Bros. M. I. Cole and George B. Horton. A paper was read by Bro. Stone, and a song rendered by Miss Clara Crockett and Misses Minnie and Maggie Sebring, of Ogden, was of exceptional merit. In the evening the fifth degree was conferred on twenty-four candidates. All had a good time and we feel benefited by having the County Grange meet with us.—J. W. Sell, Cor.

"HOW MAKE THE EXPERIMENT STATION OF GREATER BENEFIT TO FARMERS?"

BY ALVA SHERWOOD, THREE OAKS.

Included in this subject there are at least two lines of activity to be noticed: The direct work of the experiment station itself, and the means which may be employed to induce farmers to use the good results which the experiment station has already furnished. Under the first head the following suggestions may be in order:

1. Make the work of the experiment station intensely practical.

2. So far as possible give the results in compact form and devoid of technical language.

3. Strive to experiment in lines where the good results are financially apparent.

4. Experiments concerning some subjects of local interest, which in general may be objectionable, may often prove, when shown up under the searchlight of science, of great practical value, and at the same time be the means of stimulating an interest in the work of the entire department.

To illustrate: A solution of the "cause and cure of 'club root' in cabbage" would not only add several thousands of dollars annually to the incomes of the farmers of southern Berrien county, but to the parties directly interested, at least, it would prove a "knock down" argument in favor of the whole system of agricultural experimentation.

Under the second division of our subject, which, to our mind is really the more important at the present time, are the means of inducing farmers as a class to familiarize themselves with the work of our experiment station and to apply the good results to their own use. It is a lamentable fact that, to a large class of our farmers, the bulletins sent out and the work done by our experiment station remain, like the old maid schoolma'am, unappreciated blessings. The means employed to induce farmers to appropriate these blessings, which, while they may not be considered a part of the direct work of the experiment station, are certainly very closely associated with it. The agricultural press, our grand system of farmers' institutes and our farmers' organizations are all accomplishing much in the line of work indicated. And herein lies much of their usefulness.

Another important agency which should be more generally employed in bringing the farming community in touch with the experiment station is that of the individual effort of the farmer himself. One intelligent friend of agricultural education in each township, or even in each county, can accomplish volumes. The farmer and the experiment station are, in a sense, mutually dependent. Anything which tends to break down the artificial barriers between them will prove of equal advantage to both.

DO RESULTS OF EXPERIMENT STATION WORK JUSTIFY THEIR COST?

BY A. J. CROSBY.

The lecturer of the National Grange puts out this question evidently as a feeler of the public pulse and to draw an expression from those who may give thought to the subject. It would seem to us that in a broad sense this question has long been answered in the minds of an intelligent people, and voiced over and over again, not only by the exponents of our liberal and efficient system of common schools, but by the millions of our grateful recipients of its influence and benefits. Notwithstanding this, some narrow gauge,

miserly people can never be found to cry, "It don't pay."

Who may be found to stand with scales of justice and equality to weigh and measure the product of information and learning which is received from any of the branches or institutions of our great system of learning and instruction, or that may be able to equalize the cost with the results and opportunities which they present? Who is it that is qualified to set the prices and regulate the standards of value upon the people's knowledge and information? Are not the experiment stations bringing together the world's knowledge upon the subjects they take up, verifying its correctness under every conceivable condition, extending and making new investigations, repeating again and again operations to verify conclusions? In holding up their work to the view of an intelligent world, can it ever be known who all may have gained a valuable lesson or received unmeasurable benefits, and set the price thereon?

Do not many fair-minded people mistake the work of the stations and look for them to act as schools of learning only, teaching ways to raise the biggest crops, the fattest or largest animals? Does public criticism keep in view and definitely separate the aim and purpose of the experiment stations from the agricultural colleges?

Prof. A. C. True (director of experiment stations), in a report on their "objects and work," says: "The primary object of an experiment station is to apply scientific principles and methods to the problems of agriculture. It seeks to use for the benefit of agriculture the stores of knowledge regarding the operations of nature which science has accumulated, and to employ in the service of agriculture the trained brains and hands of scientists. Taking advantage of whatever has been discovered in any line of scientific research, the experiment station should institute investigations to increase accurate information regarding the great principles which underlie the growth of plants and animals and to make new applications of well-known principles in the practical work of the farmer."

It is very important that we should keep clearly before us the conception of the experiment station as primarily a scientific institution. This will enable us to understand its proper functions and prevent us from misjudging much of its work. The law outlines that "It shall be the object and duty of said experiment stations to conduct original researches or verify experiments, * * * having due regard to the varying conditions and needs of the respective states and territories."

Can you take the statistics of Broadbalk wheat field at Rothamsted, with the sixty years of experiments upon it, and from a knowledge of its acreage and yields measure the extent of its benefit to the world? If only a few farmers in the country have taken enough interest to follow in touch and knowledge of the long life work of Sir John B. Lawes and Dr. J. H. Gilbert, who shall be able to find out how far that knowledge and some improvement of methods from it may have spread as by infection of practical example among the farmers of the entire country, and tell us the financial state of benefit? Who will look over all the revolutions of the feeding economy with the accuracy of knowledge now so carefully and beneficially employed and tell us the accumulations of profits therefrom, or the bettered opportunities to be gained by the feeders of the future? Is anyone prepared to scan carefully the work of Prof. W. O. Atwater and the many others with him in their untiring efforts to solve the problems of human dietaries, and place a financial estimate upon the benefits in the health, comfort and economy of the various peoples of our country?

Until some means shall be devised to financially measure the emotions and desires of the human heart, the contemplations of memory and conceptions of the human mind, we shall say "nonsense" to your query, "Does it pay?"

SYNOPSIS OF DISCUSSIONS OF TOPICS FOR LAST QUARTER.

APRIL TOPIC—AGRICULTURE.

Question 1.—To what extent is the development of this country and its increase in wealth due to agricultural pursuits?

Agriculture is the foundation industry; others are wholly or in a large measure dependent upon it. Railroads

owe their existence chiefly to agriculture, and they in turn have aided in the development of cities and increased the wealth of the whole land.

Question 2.—What means can best be employed to give agriculture in this country the prominence which its importance demands?

All reports of discussions agree that education must be the prime factor in bringing agriculture to the front in this country. This is needed not only for a better understanding of the work of the farm, but to eliminate narrow mindedness, jealousies and extreme partisanship. Farmers should realize more fully the importance of agriculture and magnify their calling. By means of better methods of farming and advanced ideas, people of other callings will be made to look upon agriculture with favor and respect. One Subordinate Grange Lecturer thought the subject was too hard to discuss.

MAY TOPIC—COUNTRY SCHOOLS.

This topic seems to have been quite frequently discussed.

Question 1.—What are some of the greatest needs of our schools to-day?

There was unanimity of opinion that our country schools as a rule need more progressive and public spirited directors. Then better teachers will be hired and less changes in teachers will be made. Parents and the friends of education should manifest more interest in the schools. Good school houses, good furniture and school apparatus with attractive grounds are essential for best results in country school work. The old "district system," where it exists, came in for considerable discussion. While under changed conditions it may be objectionable in some respects, there is a manifest hesitancy among many farmers to accept the "town system," which, in a measure, involves centralization of schools. Opinions in this direction are about equally divided. The discussions showed that in some sections appropriations for school purposes are not adequate to the demands of the times to secure the best teachers. Much valuable time is lost to the children through cheap, inefficient teachers. The best schools are the cheapest.

Question 2.—Should agriculture be taught in our country schools, and if so, to what extent?

In the animated discussions on this part of the topic there was also a diversity of opinion as to the introduction of a text book of agriculture in our common schools, because of the multiplicity of text books and lack of preparation of teachers to teach agriculture, but there was practical unanimity of opinion in regard to the introduction of nature studies without the use of regular text books.—From National Grange Quarterly Bulletin.

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The Poultry Yard.

POULTRY FOR THE FRUIT-GROWER AND GARDENER.

There is no place where poultry fits in better than on the fruit farm or market garden. On the latter place the industrious hen and her brood may do some damage if not looked after, but the good she does will always counterbalance the injury. Upon the fruit farm, however, the hen is a benefactor, and a most effective aid to the fruit-grower in his struggles with the numerous and increasing insect pests which make life miserable. And it is not only the hen that can be relied upon as an active assistant. A flock of turkeys will outdo even the hen in the destruction of insects. Turkeys will never tire hunting them, and always seem hungry when insects are to be had. A flock of hens, ducks, turkeys or guineas, or all of them, are really a necessary adjunct to a well-regulated fruit farm, and for three good reasons: The value of their products; the work they accomplish in the destruction of insects, and the value of their droppings if properly handled. The plum grower will certainly find a flock of hens a great aid in securing his fruit from the attacks of insects. They scratch up the earth around the trunk of every tree, and thus uncover insects hidden away. All sorts of caterpillars, worms, bugs, beetles, etc., are destroyed, and all the while the hens are paying for their keep in eggs and chickens. And poultry always do well when allowed liberty to forage for themselves. They should not be given much grain, and no meat at all. They will hunt insects all the more industriously if no meat is given them. The duck is such a glutton that nothing will escape it. Some of the larger beetles, with hard shells, will be left by hens, but a flock of ducks clean up everything within reach.

The work of fowls in hunting insects is continuous during the whole season. They are early afield and are not afraid to work overtime if business is good. Their peculiar capabilities should be utilized by fruit-growers to the greatest possible extent.

For The Michigan Farmer.

COMPETITION AT POULTRY SHOWS.

The advantage of the poultry show is that it stimulates one to greater effort, shows him what other men are doing in the same line, and encourages by a comparison of notes. The man who always stays home, never goes to a poultry show, has little interest in such matters, and rather looks down upon the whole business, is just the one who seldom succeeds, and who is always decrying the success of others. It is a good thing to compete for the poultry exhibitions. The man who tries to beat his neighbor in raising fine birds is always sure to breed scientifically, raise the best poultry, read up on all points that concern his business, and in short be right up to date. If such a man does not give all of his attention to the breeding, but divides it up equally to a study of the markets, he will make money in the poultry business if it is possible for anyone.

The fellow who has a little of the fancier in him cannot long endure poor, barnyard birds, and he will either sell them off, or breed them up to a higher standard. If he hasn't the necessary information to do this he will obtain it from the papers, or from those who have been successful at the poultry shows.

Moreover, the competition at the exhibitions encourages one to higher efforts. Every man has his discouragements, and there are times when he would like to give up everything and

go out of business. But when you talk over your failures and successes with others engaged in the same business, and find that they have the same ups and downs, you draw some consolation from the experience and find yourself encouraged to go on in well doing.

The exhibitions of poultry are of inestimable value to every one interested in raising chickens. There is the place for the beginner to study the different types, it is the place for the old fancier to see what improvements have been made, and it is the place for the common, everyday plodder who needs a little stimulus in his endeavor. It is a mutual improvement and encouragement society, and the man who fails to support it with his presence and exhibitions is helping to injure the poultry business for everybody else. Competition is the life of business even in poultry raising.

Minnesota. A. B. BARRETT.

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"For several years I suffered with various diseases peculiar to my sex. Was troubled with a burning sensation across the small of my back, that all gone feeling, was despondent, fretful and discouraged; the least exertion tired me. I tried several doctors but received little benefit. At last I decided to give your Lydia E. Pinkham's Vegetable Compound a trial. The effect of the first bottle was magical. Those symptoms of weakness that I was afflicted with, vanished like vapor before the sun. I cannot speak too highly of your valuable remedy. It is truly a boon to woman."

From Mrs. MELISSA PHILLIPS, Lexington, Ind., to Mrs. Pinkham:

"Before I began taking your medicine I had suffered for two years with that tired feeling, headache, backache, no appetite, and a run-down condition of the system. I could not walk across the room. I have taken four bottles of the Vegetable Compound, one box of Liver Pills and used one package of Sanative Wash, and now feel like a new woman, and am able to do my work."

From Mrs. MOLLIE E. HERREL, Powell Station, Tenn.:

"For three years I suffered with such a weakness of the back, I could not perform my household duties. I also had falling of the womb, terrible bearing-down pains and headache. I have taken two bottles of Lydia E. Pinkham's Vegetable Compound and feel like a new woman. I recommend your medicine to every woman I know."

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My wheats are noted for sturdy straw, large yields, and are some of the most popular and profitable grown. Jones Longberry No. 1 has a record of 82 bushels per acre. Originator of Early Arcadian, Diamond Grit, Oatka Chief, E. Genesee Giant, and others. Send for catalogue to A. N. JONES, Newark, Wayne Co., N. Y.

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OHIO CULTIVATOR CO., Bellevue, Ohio.



Horticultural.

For The Michigan Farmer.

THE PEAR BLIGHT.

We thought our Bartletts almost free from any serious diseases, and that they would yield a good crop when most other pear trees failed; but since the pear blight has spread it appears that the Bartlett and Vicar are most susceptible to this disease. According to reports from the South, it has nearly driven these two pears out of Southern orchards. If this should turn out to be true of the East and West, too, it would be a pretty serious matter with thousands of growers who depend upon the Bartlett and Vicar for a good part of their income.

Probably the bees have helped to make the disease more widespread, as they sometimes carry the microbes from blossom to blossom in the blooming period. At any rate the disease spreads with great rapidity. Moisture tends to favor the growth of the disease, and during wet springs and summers it spreads much faster than in dry seasons.

The Bordeaux mixture is a poison that will limit the spread of the disease, killing most of the germs, but it is not absolutely effectual. Enough of the germs remain to keep the microbes in existence, and under favorable conditions they multiply and renew their activity. In order to control the disease absolutely with the Bordeaux mixture spraying would have to be resorted to continuously throughout the growing season.

The only absolute remedy is to cut out the affected parts. Trees that are badly blighted should be cut down and burned, root and branch. Those only slightly diseased can be saved by cutting out certain parts. All twigs and branches must be cut down until sound wood and bark are reached. It is always better to have a safe margin, and too much rather than too little should be cut away. In cutting sometimes a knife that has touched the diseased part will communicate the germs to the sound wood; consequently care should be taken not to touch the diseased limbs with the knife. Cut well beyond the danger line, and then the knife can be used on sound limbs or trees. The best time to cut is in August and September when the blight is plainly visible, but in dry seasons several cuttings can be made through the summer.

New York. PROF. JAMES S. DOTY.

For The Michigan Farmer.

CULTIVATING THE PEACH ORCHARDS.

After selecting the varieties best adapted to the soil and climate, the peach trees should be cultivated as carefully as a field of corn. Probably no one except a commercial peach grower ever does this. Those who have a small peach orchard attached to the farm frequently let the trees take care of themselves, the same as most apple and pear trees are allowed to grow up, but if one is going into peach growing for profit, he must observe the rule of cultivation carefully. There is too much competition in peach growing now to make profits large, and unless the season for good culture helps the grower, he is apt to lose rather than make.

Cultivating vegetable crops in the peach orchard is all right so long as we do not raise those plants which rob the soil of all of its best mineral elements. Corn, I believe, weakens peach land, but tomatoes, beans and peas help it if the vines are plowed under to rot in the soil. Grass sown in the orchard and plowed under every spring and fall cannot fail to enrich the soil. But the leguminous plants I consider the best. They not only yield a fair return for the cultivation of the orchard, but they add to the soil the very elements the peach trees demand.

It is generally recognized that potatoes or wheat should not be raised in a peach orchard, and if there is any difference in the crops to be raised the very best should be selected. But when the trees come into bearing, planting nitrogen will take the place of artificial fertilizers. Clover is considered a crop of all kinds should be abandoned. Cultivation then should be confined to a shallow spring plowing and subsequent cultivations until July. It is doubtful if it pays to cultivate later than that. Plenty of successful growers stir the top lightly until late au-

tumn, but I could never quite see the advantage gained, except that the land is kept free of weeds.

We need fertilizers for peach orchards, unless they are planted on very heavy land where stored manure and to be one of the best fertilizers, but both this and barnyard manure and general commercial fertilizers seem to me to be inferior to nitrate of soda, applied at the rate of fifty pounds to the acre, muriate of potash, kainit, or sulphate of potash. The peach trees need the potash salts and phosphates more than an excess of nitrogenous foods. These latter produce excessive wood and foliage growth, but at the expense of the fruits. Four or five hundred pounds of potash to the acre will do no harm, and often much good.

Maryland.

JAMES T. SMITH.

For The Michigan Farmer.

FRUIT NOTES.

Though the season for strawberries has long been past, a few notes regarding varieties may be of interest to those who intend to set new beds.

One of the varieties which have stood the best of several seasons is the Greenville. It is adapted to a variety of soils, and is recommended by those who have grown it on cold, sandy land, as well as those upon clay. The flavor is good, the size above the medium, and held well to the last. The yield this year was heavy, and in general it has ranked well as a producer.

The Clyde is another berry which is highly praised for productiveness. It also has flavor and size to its credit, but it rusts badly and its light color is against it for a market berry.

The Glen Mary is one of the new varieties which have been introduced with a great flourish. It may be good for some localities, but we find that the growers here do not fancy it. No berry handles better. One man who had tried it assured us that the fruit would dry down in a basket before it would mould. It was the heaviest yielder among more than a dozen varieties tested. But these are its main good points. It is so deficient in flavor that it is of little value for any purpose except to look at.

Another berry which has frequently been heard from of late is the William Bell. A strawberry man of long experience informs us that when his first plants of this variety were growing last year they presented such a fine appearance, surpassing all others in vigor, that he expected great things from it. This spring was a disappointment. The vines looked weak and sickly, and the crop was small. But the fruit, what there was of it, was highly colored and the flavor delicious. Perhaps the plant cannot stand high feeding, and this may have been the cause of the failure. At any rate, the reports from other sections are so favorable that it ought to be given further trial. Such a berry as the William Bell is worth taking considerable pains with for the home garden, if for no other purpose, as we think those who have become acquainted with the ripe fruit will agree.

The variety which can at least grow vine enough is the Splendid. In yield and quality the berry does fairly well, but the color is too light.

Some who have grown the Brunette place it at the head of the list for flavor. Its dark red color is another attraction. It is inclined to rust. In size and yield it is only medium on a heavy clay loam, the only place where we have any knowledge of it.

The Brandywine, like many other varieties, has been the victim of too much praise. Our growers find that it does not come up to expectations. The yield is small, and the large hull gives the berry a poor appearance for market. When kept in hills and given good cultivation it does well for the small garden.

One of the old varieties, which seems to be in little danger of being retired, is the Haverland. It is productive and healthy. The berries are large and sweet, which make it a favorite for the home supply or the near market, where its tendency to soften is not an objection.

Of all the varieties brought forward during the past dozen years, we doubt if any has more justly earned the highest praise and the severest condemnation than has the Jessie. The largest, highest colored, handsomest, most salable berries we saw the past season were of this variety. They were raised on a black sand which is considered too poor to raise good farm crops, but which seems to satisfy this freak

ish berry. There was humus in the soil, with a plenty of moisture not far away. For clay soil we would not take the plants as a gift, if almost any other variety could be obtained. But the fruit must be handled promptly, as it "goes down" in a hurry after picking. In the few places where the Jessie really amounts to anything it is productive, but in other localities it is a shy bearer.

For a late berry the Gandy still remains in favor. It does not bear well unless given the best of cultivation, but it comes at a time when strawberries are scarce. Its firmness makes it valuable for canning, though in color it is not equal to some others. As it blossoms late, it escapes the early frosts, which often ruin other varieties, but this makes it of small value as a fertilizer.

We were surprised to learn that there was a good demand this year for the Timbrell on the Detroit market. This berry has been condemned by market men on account of its wretchedly poor color. People may be satisfied with half-ripe fruit at first, when nothing better can be obtained, but during the length of the season it is different, and the light green of the Timbrell with its dark red blotch on one side, even when it is ripe, is not enticing when placed beside other kinds. If people are asking for the Timbrell it is because they have found out that there is an excellent flavor beneath its forbidding exterior. The experience of some who have fruited it leads us to think that it prefers a heavy soil. If one does not care for the color it should be a good berry for canning, as it is one of the firmest. The horticultural reports in 1895 showed that it was generally a failure in Michigan, but some succeed with it, we have noticed.

The old Warfield is still sought for canning, though the majority find it rather tart for table use. One large grower informs us that it is one of the worst for rusting, while others find it almost free from the disease. The first had his berries on clay, the others on sand. Perhaps this explains the difference.

An excellent berry in some places is the Marshall, but unfortunately its usefulness is decidedly limited. It needs a strong soil and good cultivation. It is not generally recommended.

This list contains comparatively few of the many varieties, good or bad, which are to be obtained, but perhaps it will be of assistance to some who wish to set plants. Varieties are uncertain, at best, and about all we can do is to comply with the conditions of soil and location, as far as we can, then hope for good results.

F. D. W.

For The Michigan Farmer.

GARDEN NOTES—LARGE VALUES IN SMALL BULK.

A few days ago I placed two baskets of celery in my buggy and drove to the railroad station. At the same time a neighbor drove to the station with a two-horse load of potatoes. He received about the same amount of money for his potatoes as I did for my celery. His load of twenty-five bushels of potatoes with the ordinary culture he had given them were probably grown on one-fourth of an acre, while the celery was grown on about one square rod of land, and probably with less work.

Last winter I saw a man on our streets with a basket of cut flowers. He was from a neighboring village, and had grown them in his greenhouse. In conversation with him, I found the value of his basket of flowers was greater than a two-horse load of potatoes or cabbages at present prices. The man who was selling the flowers was getting pay for his experience and skill. His business of growing flowers was pleasant, agreeable, and also profitable, taking into consideration the expenditure of labor. Of course everyone cannot grow flowers and luxuries in fruits and vegetables to sell for a fancy price, for the market

would soon be overstocked. To show that there are many villages with a market for this kind of produce, which is not supplied by the local gardener. I will describe an instance which lately came under my observation. Some time ago I was in a village of several thousand inhabitants. I visited the market garden which supplied the people with vegetables. The main crops were early potatoes, cabbages, and other coarse vegetables. His land was good garden soil, and adapted to nearly all kinds of garden crops. The dealers in the village were selling berries, and other fruits, also Kalamazoo celery. With sufficient skill and enterprise these crops could just as well have been grown in the market garden near the village with a much larger profit.

Not far from this garden was a stream of water that could have been utilized for irrigation with small expense, and a combination of enterprise with a knowledge of gardening methods would have made gardening a were plenty of wealthy people to buy good business in that village, for there the more profitable luxuries that could have been produced. This year I had some very fine celery that was grown by the plan of close planting, and with irrigation. I shipped a basket of it to fashionable hotels, and obtained a fancy price for it. As I wished to know how much the land was paying me per acre, I measured the space from which it was taken. I found I was getting over \$30 per square rod, or at the rate of \$5,000 per acre. Of course I do not make my whole crop pay at this rate; only that portion of it that is so well grown that I can get a fancy price for it. From another part of my celery field I made a shipment to a commission merchant. This celery was grown on only moderately rich soil, according to the old system of wide rows, and without irrigation, and was about the same in quality as I generally see in the gardens in the village in which I live. I found there was but little money in growing a medium or poor quality of celery to ship to a market where it would come in competition with other celery. This celery only paid me at the rate of \$300 to \$400 per acre, or less than one-tenth of that which was grown by special culture, and marketed at a fancy price. In comparing the profits of these two shipments, it is easy to see where the money is in gardening. In the labor required to grow them there was but little difference. The greater profit in the first instance was made by using large quantities of fertilizers, and water for irrigation. I find plenty of wealthy or fashionable people who are willing to pay a fancy price for luxuries in fruits and vegetables, if they can get something better than the average in the market. The large varieties of strawberries will sell for a fancy price when grown in narrow rows, with plenty of fertilizer and water. People are willing to pay for water when it goes into such luxuries, and the more you can get in the greater the profit. It is usually the attractive appearance that induces the well-to-do to buy. They want that which makes the best appearance on the table, and with them its use is largely ornamental. In every large village a

[Continued on page 125.]

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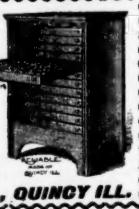
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small green house for flowers, and for farming early vegetables, is a good investment for the enterprising and skillful gardener, and if he grows fruits and vegetables for a fancy market, he must have a good garden soil, and use plenty of fertilizer and water. There is less competition on those crops which are the most difficult to grow, and the skill required to grow them is all that hinders their overproduction, and is what makes them profitable.

W. H. JENKINS.

Delaware Co., N. Y.

For The Michigan Farmer.
RECUPERATING DEBILITATED TREES.

Debilitated trees, fruit or shade, are much like people who get run down and need special care and tonics to make them well again. Sometimes we attach too much importance to the insects, and attribute to them all the loss and injury sustained in the orchard. I have found in my experience that very often the insects are only secondary causes in the complete or partial loss of fruit. The trees have become run down and debilitated in one way or another, and then all the worms, borers and fungous growths found in the orchard seem to make a combined attack on them. The consequence is sometimes very disastrous. It is true that sometimes the cause of the trees' debility is the attack of the insects and fungi, but in an orchard where intelligent care and spraying are regularly attended to, this does not often happen.

While it is necessary to make immediate examination of such trees for borers, worms, fungi and various destructive insects, it is very important that the real cause of the difficulty be reached. Until this is removed temporary results will only be obtained. The trees will never recover the vigor and energy necessary for them to overcome their little enemies.

The soil and its elements are probably responsible for the condition of the trees. One must, after all, go down under the soil to learn the cause of a tree's debility. Down there the feeding roots determine the power or weakness of the tree. If the roots are not in good, healthy condition, sufficient food cannot be taken up to nourish the tree, or if the soil is lacking in nourishment the roots are rendered impotent to perform their functions. A little examination of them and the mechanical conditions of the earth around may teach some valuable lessons.

In the first place, the drainage of the soil may be so poor that water is held in it to a much greater extent than the trees require. Roots of fruit trees do not want to stand continually in the water. Wet feet are bad for the trees. Their general health cannot improve until better drainage is given. To do this is the first step in the progress of bringing the trees back to their normal condition.

Then look at the soil. Is it rich, or is it barren and sterile? A little more fertilizer in it may produce marvelous results. If it is rich, heavy soil, drainage may help it, and then surface cultivation further improve it. Cultivation around the trees which does not disturb the roots is always beneficial.

New York. S. W. CHAMBERS.

KEEPING APPLES.

At a meeting of the Missouri Valley Horticultural Society, one of the members, Mr. Davison, gave a description of his method of keeping apples. His cellar is 80 by 40 feet, and about 8 feet deep, built of stone. He has a chute running into the cellar to run the apples down. He then sets the barrels (without heads) one on the other, three high. The cellar has a large double door in the end and regular temperature is maintained by opening and closing this. He opens at night to admit cool air and closes in the day time, and by this process a comparatively uniform temperature is maintained. The upper story cannot be kept as cool as the lower, and in this he keeps the apples that are to be sold before the holidays. In building such a structure he advises the use of stone in the lower part, but wood for the upper, as it can be kept cooler.

Mr. Goodman, another member, reported that in his cellar he could keep from 3,000 to 4,000 bushels of apples. He first sprinkled with a solution of copperas, then piled the apples in bins as high as possible. Upon being asked for his opinion on ventilation, he said that they did not want too much; that it was his experience that the apples exposed to the air rotted worse than

those in the middle. Apples left in piles have a gray coating formed on the outside, and if they once reach this stage they are comparatively free from rot. This coating is formed in from six weeks to two months, and most of the rotting is done during this period. The cellars should be sprayed or sprinkled frequently to stop all fungous growth. Mr. Goodman also advocated building storage houses over springs, as the flow of water will keep the house cool, and also give sufficient ventilation. He quoted cases where good Another method, where ice is kept, is to have the apples stored in a cellar under the ice house, the floor above being tight to prevent leakage. This is approximately the method for cold storage adopted by one of the cold storage houses in Kansas City, in which apples have been kept for three years with remarkably good results.

The Dairy.

We have a complete Dairy and Farm Creamery in constant operation on the Experiment Farm at Climax, Mich. This is personally conducted by J. H. Brown. All dairy correspondence should be sent to Climax, Mich.

THE EDITOR'S DAIRY NOTES.

SOME STATION EXPERIMENTS WITH TUBERCULOSIS.

Several of the experiment stations are conducting prolonged experiments with cattle afflicted with tuberculosis. We have taken pains to secure reports from nearly all the stations, and carefully study the tests and deductions therefrom.

This time we take extracts from two New England stations. Prof. C. S. Phelps, of the Connecticut Agricultural College, has completed a year's work with this disease, and makes the following deductions:

Our definite knowledge of tuberculosis is of recent origin, and is limited at the best. We know comparatively little regarding the conditions which favor its spread and development, either among animals or man.

Most of all are we lacking in definite knowledge of the dangers of the disease to mankind from the bovine race. New experiments and new discoveries may so modify our views as to make present conclusions of little value.

1. Bovine tuberculosis is usually a disease of slow development, depending for its progress on conditions which favor the spread of the specific germs, and the extent to which the animal organism may be subject to these germs, owing to bad surroundings, poor ventilation, etc. The general vigor of the animal, or its power to resist the action of the germs, will also affect the progress of the disease.

2. The stage at which the disease may attack the udder of the cow, or become so generalized as to develop the germs in the lacteal ducts, is a matter of more or less uncertainty. In the earlier stages of the disease, or when no physical symptoms appear, such as hard lumps, or stringy or "gargoye" looking milk, udder affection is comparatively rare. Increasing evidence tends to imply that there is little danger of spreading the disease by the use of milk of diseased cows so long as the udders remain unaffected.

3. Calves fed on the milk of tuberculous cows with no udder affection are not liable to acquire the disease from this source. In the tests made at this station calves have been fed for periods of five to sixteen months upon the milk of cows which it is reasonable to suppose are tuberculous, but without the disease having appeared in the udder, and in no instance do these calves show symptoms of the disease, either by the tuberculin test or physical examinations.

Although we consider, from our own experience and observation, that no serious danger has apparently resulted from the use of milk drawn from cows that are in the first stages of the disease, still we should very much dislike to use the milk.

No "expert" can, from physical examination, after a cow has reacted, determine whether or not the udder is affected. If the cow is, apparently, in good health, there may be no danger at first, but who can discriminate with any real certainty?

Yesterday we completed the tuberculin test of a herd of cattle in Southern Michigan. Three cows reacted and were killed. A post-mortem showed all three animals badly effected.

One cow was due to calve soon, and the fetus was carefully examined by

the state veterinarian, nothing being found of a tuberculous nature. All evidence from various sources goes to show that many calves from tuberculous cows may be saved, if the dam is in the first stages of the disease, which may frequently be determined from her physical appearance and condition, although condemned by the tuberculin test.

SOME NEW HAMPSHIRE EXPERIENCE.

From the Rural New-Yorker we learn that the cattle commissioners of New Hampshire have just reported a very interesting experience in treating tuberculous cattle. On June 12, 1897, a herd of Holstein cattle was tested with tuberculin; out of 21 cattle, 14 reacted, thus indicating the presence of the disease.

The owner of the cattle was in favor of killing them at once, and two which were far gone with tuberculosis were destroyed. The remaining animals, nine cows and a bull, appeared vigorous and healthy. The owner of the cattle believed that every animal reacting from the test ought to be killed, but the commissioners did not wish to kill the animals without some other evidence of disease aside from the tuberculin test.

The result was that the owner offered to contribute the ten animals free of cost for the purpose of experimenting. The nine cows were placed upon an isolated farm, where they were given good sanitary treatment. They were given plenty of sunlight and exercise and moderate feed, and kept in the open air day and night, except in stormy weather. For six months, the milk of this herd was thrown away or fed to pigs. They were tested three times. On September 12, five animals passed the test successfully. On December 9, only three failed to pass the test, the bull in the meantime having been killed. This bull was carefully examined by a veterinarian, but the examination failed to reveal any more evidence of disease than could be found in a large percentage of the cattle in the country.

On February 23, the nine cattle were carefully tested, and three failed to pass the test. One of these was, evidently, in bad condition, and was found to be diseased. The other two gave but slight evidence of tuberculosis. It was evident that the disease in these three cows had not only been arrested, but they were on the way to ultimate recovery. How much of this result was due to the treatment of the animals, and how much to the alleged curative qualities of tuberculin, no one can accurately say.

It is enough to say that, one year after the cattle were taken, six of them were returned to the original owner, cured, or at least with no evidence of the disease about them. The bull and two of the cows that were killed were so slightly diseased that there could have been but little danger in using their milk. In one cow only, of the ten, did the disease assume a dangerous form.

It is our opinion that frequent tests, only three months apart, are apt to be misleading. Repeatedly inoculating the system with tuberculin may cause the animals to fail to react, even when still tuberculous.

The only safe plan, when the tests are but three months apart, is to use more than two cubic centimeters (a full dose for mature and large animals), of tuberculin, and the amount must be more or less conjectural.

We see no reason why an animal should be retested, until at the expiration of six months or longer, and we should not be surprised to hear that some of those New Hampshire cows were yet found to be tuberculous.

The New Hampshire treatment is interesting, and all right, in our opinion, except that we should let six months elapse between tests, as recommended by the Bureau of Animal Industry at Washington.

For The Michigan Farmer.
KEEPING ENSILAGE.

The question of keeping ensilage several years, especially through the summer months, is not always easily solved by those who have not had experience in this line. The average farmer builds a silo capable of holding enough ensilage to keep his stock through the winter and up to spring pasture time. Then he likes to empty the silo, clean it out, and prepare it for the new crop. But there are times when considerable ensilage is carried over, and it is a question of destroying it or of keeping it clean and palatable for stock through the summer.

A well-constructed silo, filled properly with corn ensilage, will give one little difficulty. In fact, ensilage can be kept two or three years, and be as palatable to the animals as when first put in. The ensilage must be palatable to do much good. If the animals refuse to eat it except when starved into it, the food is doing them little real good.

A common way to preserve the ensilage for an indefinite period is to pour a few pails of warm water on the surface in the spring to cause surface mold. If a good mold forms on the surface the ensilage ought to keep fairly well. But by this method some of it is apt to spoil anyway. The mold does not completely seal it up and keep out the air.

A better way to preserve it is to cover the surface with old, wet, rotten straw. The older this straw is the better. It may be necessary to wet it. Then the moisture and heat will help it to decay faster. On top of this early in the spring sow oats, and let the plants grow all they will. The roots, and later the dead tops, will help to seal up the mass below. Sometimes nothing more is required than the mere sowing of oats on top of the ensilage. Then by pouring a little warm water over it, the oats will germinate, and cover the surface with all the protection needed. Ensilage treated in this way has been kept over two winters and two summers, and none of it was spoiled except a slight layer on the surface.

Indiana. WILLIAM CONWAY.

POINTED TRUTH.

Mrs. G. H. Watson, Apple River, Ill., makes some remarks in Hoard's Dairyman which are too good to let pass. Evidently Mrs. Watson knows what she is talking about, for she tells some pointed truths about dirty dairying. She says:

"We have often seen good advice in regard to cleanliness in handling milk and making butter. That it is sadly needed by most farmers, their hired help, yes, and often by the mistress herself, I know beyond doubt. If we all wore spectacles, and those spectacles were powerful microscopes, I am sure we would refuse to eat butter and cream, or drink milk, until those who handle them learned to be more careful."

"I have seen a man packing a cat about, while it rubbed hair, dust, etc., off on his coat; then he would put the cat and the pail down together, and proceed to milk the cow, while pussy was an interested spectator, peeping into the pail occasionally, to see how fast it was filling up; then she would get a squirt in the face, and sit back awhile until she wiped her face off."

"The cow may lie in the stable or shed until she is thoroughly plastered, and she seldom gets curried and cleaned off, or the bag washed before being milked. I am not like the old woman, who thought the milk would be all right if she strained it again."

"I have seen pails, or pans, or cans washed with a rag that would make a horse snort, if it got within a rod of his delicate nose. I sometimes think the sense of smell is rather dull in most people."

"I was in a butter buyer's cellar, in a town not far from here, last season, before the heat of the summer was quite over. A man brought in a tub of butter. 'Six cents is all I can give you; it is hot weather butter,' said the buyer."

"Some of it was churned yesterday, and all of it is new. I will take it home and use it for wagon grease, before I'll take six cents," said the man.

"I thought, after tasting it, maybe that would be a good plan—maybe it wouldn't hurt the wagon."

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MANUFACTURES OF IRON AND STEEL.

The phenomenal growth of our manufacturing industries, both in supplying our own markets and those of other parts of the world, is illustrated by some figures just compiled by the Treasury Bureau of Statistics regarding the imports and exports of manufactures of iron and steel. These tables show that the exports of manufactures of iron and steel in the fiscal year 1898 were five times as great as in 1880, more than double those in any year prior to 1896, and 23 per cent greater than in 1897. On the other hand, the imports of the manufactures of iron and steel in 1898 were in value but one-sixth those of 1880, one-fourth those of 1888 and one-half those of 1896. To quote the official figures, the exports from the United States of all articles classified as "Manufactures of Iron and Steel" amounted in 1880 to \$14,716,524, in 1890 to \$25,542,208, in 1896 to \$41,160,877, in 1897 to \$57,494,872 and in 1898 to \$70,367,527. Meantime the imports of manufactures of iron and steel, which in 1880 were \$71,266,699, fell by 1890 to \$41,679,501, by 1896 to \$25,338,103 and in 1898 to \$12,615,913. Thus, while the exports of manufactures of iron and steel are in 1898 five times those of 1880, the imports of the same class of articles were in 1898 less than one-fifth those of 1880. In 1880 our imports of manufactures of iron and steel were five times as much as our exports, while in 1898 our exports of iron and steel were more than five times as much as our imports. American manufacturers have, since 1880, taken possession of five-sixths of that portion of the home market which was held by foreign manufacturers of iron and steel and have at the same time increased their sales in foreign markets 400 per cent. While the imports of iron and steel were falling from 71 millions to 12 millions the exports of the same class of articles increased from 14 millions to 70 millions.

STATE FARMERS' INSTITUTES.

We are in receipt, from Kenyon L. Butterfield, superintendent of Farmers' Institutes, of his report for the past institute season.

The report gives the attendance at county and one-day institutes, specifies the counties having the largest attendance at county institutes, and the places having the largest one-day institutes. Also the cost to the State of the one-day institutes, and the cost to the local association. From the figures of cost given by the Superintendent we take the following items: Local cost of county institutes, \$1,280.66; local cost of one-day institutes, \$184; expense to the State of one-day institutes, \$500; state appropriation for institutes, \$5,500; no itemized statement of the expenditure of the \$5,000 is given.

In regard to attendance at the various institutes, and the number held, we quote the Superintendent's figures:

Number of county institutes held (including State Round-Up).....	67
Number of one-day institutes held.....	84
Total attendance at county institutes	87,133
Total attendance at one-day institutes.....	31,559
Total attendance at all sessions of all Institutes during the year.....	118,692
Number of Women's Sections.....	58
Total attendance at Women's Sections.....	8,705
Total number of Farmers' Institute Societies.....	7,080

In regard to the method of calculating the attendance the Superintendent says:

"The following means total attendance of all sessions of the institutes mentioned, and is found by simply adding together the attendance at each session. Other figures showing highest attendance at any session, and average attendance per session, will be found in the report of the Superintendent of institutes."

We judge from this statement that

the figures regarding attendance published above were arrived at by the same means, and if so, they should be discounted very materially in considering the actual number of people who really attended the institutes: For instance: A county institute generally lasted two days, and had four or five sessions. Very largely the same people attended each one, and it is safe to say that every person attended at least three sessions. The 87,133 would therefore have to be divided by three to get the number of persons present. In the case of the one-day institutes there were generally three sessions, and everyone attending was present at two of them, some at the whole three. The real attendance, therefore, would not be one-half of 31,559. We merely point out these facts so our readers will have a better conception of how many people really attended and took part in these institutes. If the total attendance of 118,692 is divided by three, which we think is about right, we have a total attendance for the state of 39,564 persons. Taking each family in attendance as represented by three, and we have a total of 13,188 farmers' families which attended and took part in these institutes the past season.

The matter is of interest as showing how many farmers were enterprising enough to avail themselves of institute privileges. It is evident the number is much less than generally believed.

FROM MICHIGAN TO WYOMING.

Mr. W. J. Garlock, once a prominent farmer and breeder of Shropshires, near Howell, this State, but now a resident of Wyoming, in a private letter written to the editor of The Farmer, after his return from a visit to his old home, gives some interesting notes of his observations in Michigan and conditions in Wyoming, from which we give some extracts:

"Our business here is entirely different from what it was at Howell. I would not go back for anything; but more than once I have wished for the friendly advice of those left behind, through The Farmer, and at institutes, etc.

"I noticed the farmers in Michigan were keeping very few sheep, and were narrowed down to a smaller compass, I thought, than when I was there, in regard to crops. The prosperity of the farmers seemed to show itself in different ways. Nearly all that deserved it had a good, comfortable home and plenty of machinery to facilitate the drudgery of the farm.

"Michigan is one of the solid states—looked up to as a model of industry and enterprise. Like Paul, a man from Michigan is a citizen from no mean country. I surmise it is not as easy for a poor man to rise there as it once was.

"We are having prosperous times since the last election. Wyoming sheep and cattle men have no reason for complaint. I do not think there is a richer state in the Union, when population and capital are taken into account. The worst difficulty soon will be the crowding of the range."

Mr. Garlock is right as to the condition of the sheep industry in this State. It has lost a good deal of ground, but it is now growing again and will soon be on a sound and healthy basis. The amount brought into the State for mutton and wool the past eight months has been no mean addition to the income of the farmers who have held to their flocks. We should have at least three millions of sheep in this State, and of a high standard. The breeding flocks of all sorts should be largely increased, and the grade flocks carefully culled. Wyoming certainly offers a fine field for the industrious and enterprising.

To the young man or woman who wishes to secure a business education, we take pleasure in calling their attention to the Detroit Business University. It has every facility for the student, a splendid corps of teachers, and a record of business success unequalled in the State.

OBJECTS TO THE SENTIMENT.

c the Editor of The Michigan Farmer. In a recent issue of The Farmer I saw a comparison of farm and shop labor. Granting the truth of the statement, I do not like the sentiment expressed. I believe it said the bright boy soon left the farm, and the old folks, for good. Now, I am of the opinion that it is the bright boy that stays by the father and helps to lift the mortgage from the old home, and from year to year add acres to the old homestead. Every thoughtful person cannot help but see that the chance of earning a home grows less and less to the laboring man every year. A great deal of the prosperity that we credit America with is largely due to the newness of the country and to the sparseness of our own population, and not to our form of government, as many seem to think. And I believe that another score of years will cause us to see more poverty and hardships than we could dream of at present.

As we look about us we see a large class of individuals who live from hand to mouth, from day to day, making no provision for the future and old age, or the day when youth in strong competition will drive them from the field of labor. I know of no more sorry sight than a man who has let the springtime of life go by without making a provision for the future, and in middle age he sees the young man preferred in all branches of labor; and methinks where we see one such case today, in twenty years from now we will see many. So I say it is the wise boy that stays by the farm unless he is very sure he has the capacity of becoming something better than a common laborer, and that he will be able to secure himself a competency under the age of fifty. The man who has not secured himself a home and business at that age you may venture to say will never have one. I do not wish to underrate the drudgery of farm life, for it is a fact. But I am quite sure there is a drudgery in all avocations that lead to success and independence. Some of the hardest working people

I have ever known have been those engaged in trade or mercantile pursuits. And there is a nobility in labor, I care not whether it be in forming a shapeless block of marble into a living beauty or in writing a grand poem, or simply taking a piece of land in its natural state and hewing and polishing it into an ornament to the country, thus creating a comfortable home and remunerative business. Let us not neglect the true culture of the mind and heart (and I believe that there is as much chance for this on the farm as in any other pursuit), but let us live up to our privileges as human beings and not seek to imitate insect life, which lives but for the pleasure of a day.

MRS. MAC.

WHO KNOWS ANYTHING ABOUT CRUSHERS?

Imlay City, Mich., Aug. 9, 1898.
Michigan Farmer:

An agent for the sale of a stone crusher is circulating a petition among our farmers requesting the Town Board to purchase a crusher.

Will some of your readers in towns where a crusher has been purchased give their opinion through your columns as to whether it is for the interest of farmers to favor such purchases?

Yours truly,

FARMER.

NEWS SUMMARY.

Michigan.

A cement factory is shortly to be established at Morrice.

Eaton Rapids voted Monday to bond the city for \$25,000 to erect and maintain a water works system.

Lake Shore railroad people are figuring on extending the Lansing branch to Owosso, making the latter city the terminal instead of Lansing.

Detroit authorities have succeeded in capturing the three Johnson brothers, who constitute one of the most noted gangs of counterfeiters in the country. Several accomplices are also in jail and the evidence is said to be strong enough to convict the entire gang.

Sheriff Snow, of Kalamazoo, has arrested Wm. H. Kulp, of Marshall, and Joseph Gregory, of Jackson, as being directly implicated in the recent bank robbery at Richland. Three others are believed to have been connected and are also behind bars. Gregory has a

farm near Jackson and a search of the place uncovered sufficient evidence to convict him of the crime with which he is charged, besides furnishing indisputable evidence that he was implicated in a recent burglary at Tekonsha and in the robbing of the post-office at Onondaga. The evidence against Kulp is also very strong as investigation shows that both men are experienced crooks.

The board of regents of the University at Ann Arbor have decided to make a legal fight for the legacy of \$125,000 recently left to the institution by the late Dr. Elizabeth H. Bates, of Port Chester, N. Y. Relatives of the deceased are making an effort to break the will.

General.

The farmers of Kentucky are soon to organize a state agricultural society.

Gov. Schofield, of Wisconsin, has been selected as his party's candidate for a second term.

Dr. James Hall, the noted New York geologist and paleontologist, died recently in the White Mountains, where he was spending his vacation. He was 87 years old.

Patrick Corbett, father of the noted pugilist, killed his wife last Tuesday morning and then committed suicide. It is claimed that his mind had become unbalanced through brooding over financial reverses.

Robert P. Porter, the superintendent of the last general census of the United States, has been appointed a commissioner to examine and report upon the finances, banking systems and customs laws of Cuba and Porto Rico.

Although only 114 days elapsed from the date of declaring war until the protocol was signed, it is estimated that the struggle has cost the government \$150,000,000. The appropriations made by congress on account of the war aggregate about \$360,000,000, and cover the time to Jan. 1, 1899.

The protocol drawn up last week by Secretary Day and Ambassador Cambon was duly signed and the President immediately issued a proclamation commanding a suspension of hostilities. Instructions to that effect were at once sent to the commanders of the military and naval forces. The protocol provides that Cuba, Porto Rico and other Spanish possessions in the West Indies shall be evacuated and that commissioners appointed by both countries shall, within 30 days, meet at Havana and San Juan respectively to arrange and execute the details of evacuation. It also provides that each country shall appoint not more than five commissioners, who shall meet in Paris not later than October 1, for the purpose of negotiating and concluding a treaty of peace.

The best is the cheapest, therefore we advise all our correspondents to use the Magic dyes for any and all kinds of coloring—they have a beautiful lustre.

Improved Dederick Patent Steel Case Reversible Continuous Press.

The Dederick reversible press is the only horse press on the market that has steel cases. This machine is equipped with our loose horse lever attachment so that the traverser rebounds by the reaction or back expansion of the pressed material, thus pressing a charge or section to each movement of the horse either way, or pressing two sections instead of one at each full turn and reverse. By the aid of our patent condensing hopper we are enabled to put 50 percent more into the press box at a charge; moreover it is hard and disagreeable to feed loose hay to a press without a preliminary condenser. It is built strong and can be used with two horses if desired. It is the only press that can be operated with the entire press standing in the building with only the horse lever projecting. They have a novel device by which one horse has the power of two or other like presses, and the traverser is reversed by the pressed material, thereby saving half the time and travel of the horse. The greater the power the more compact the bale, hence economy in time and freight. They have open side bale chamber, retainers, screen press box bottom, open feed orifice and folding roller. The capacity is from one to one and one-half tons per hour—depends on material and operator.

A steam press is also manufactured which has steel cases and is double geared throughout, and contains all the leading points that could be desired in a machine to be operated by steam power, and is practically noiseless, allowing common conversation to take place during its operation, without interruption. Special prices and catalogue may be obtained from the manufacturers, Castree & Shaw Co., Owosso, Mich.

The above Company also manufactures the Star Steel Land Roller and will furnish special prices upon application.

DAWSON'S GOLDEN CHAFF

Guaranteed Pure Seed Wheat.

Our seed is grown at considerable expense and hard labor to keep it pure and clean. Order early. Many money orders returned last season.

Price, two bushels or more at one order, \$1 per bushel. New Grain Bags 18¢ extra.

J. H. BROWN, Climax, Mich.

The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD.

We should be pleased to have any of our readers who take an interest in household topics send in their views and opinions upon any subject which is under discussion, or which they wish discussed. The invitation is general, and we hope to see it accepted by many. Address all letters for The Household to Mrs. Ella E. Rockwood, Flint, Mich.

For The Michigan Farmer.
HOW JACK'S WIFE CAME TO BE A NEW WOMAN.

That new woman, sir, is my wife,
Transformed from a household drudge
of past years,
Who never did have time to go from home,
To the graceful, happy woman she now appears.
I'll tell you how it came about,
As nearly as I can,
And perhaps 'twill be the means of helping
The wife of some other man.

We men have been led to think
Our wives should be our slaves;
But that's all stuff and nonsense—
We shouldn't be such knaves.
To tell the truth, I've got waked up,
Along just toward the last,
And things are different at our house
Than they have been in the past.
'Tis queer I didn't notice how much she stayed at home,
But often when I asked her if she didn't want to go to town,
She'd say there was so much to do. But now I know,
'Twas all because she didn't want to wear that shabby old black gown.

You see the children were going away to school—
Their clothes must be nice and new—
But their mother could wear old bonnets and cloaks—

For her most anything would do.
You ought to have seen the house after they would go away!
Caps, mittens, boots, lay on the floor,
Dresses, aprons and shawls on chairs would lay;
And it would take till nearly noon
To set the house in order—confusion reigned in every room.
Alas for me! I wasn't perfect;
I would call for wife to bring my best clothes, socks and shirts;
Call her to bring them when I knew for twenty years or more.
My socks and shirts were always in the bureau drawer,
And best clothes to the right of closet door.

The children and I are working now
On the co-operative plan;
We see she gets her share of gowns,
And we help her all we can.
Ever once in awhile it happens I have to have my say.
You know how she used to scrub that kitchen floor,
And if we happened to get in the way
She would scold and look so cross we would soon get out of sight,
For she was bound to have a spotless floor.
If it took her half the night.

The other day the oldest boy got her to go to town,
And while she was gone the children and I just painted that old floor brown.
Now the girls help wash the dishes, wash and iron and mop the floor,
And there'll be no more scrubbing ever done in this house any more.
The boys bring in the wood now, and help mother in many ways,
Then she helps them with their lessons and joins in the games and plays.
She goes to the clubs and societies, and is getting young and gay,
And it's all because one man, at least, saw the error of his ways.

TUSCOLA.

HOME CHATS WITH FARMERS' WIVES.

GETTING AHEAD.

Something we all want to do is to "get ahead," as the expression is, which of course means to accumulate property. Some are born with this accumulative faculty, and others seem never to be able to acquire it. One seems possessed of the ability to turn everything he touches into money, while his neighbor works just as hard yet never gets out of the state which is forcibly expressed by the words "hard up."

There must be some reason for this, and while the individual who never succeeds in getting on in the world usually ascribes the fact entirely to luck, his neighbors are quick to see that he himself is at fault and could point out wherein the causes of ill-luck lie. It is not so much ill-luck as ill-management, in nine cases out of ten.

* * *

But while we may readily see the faults of our brother man let us women not forget that we may have something to think of concerning our own doings. Many a woman is fully as much to blame as her husband for the fact of their not getting on in the world. The spendthrifts are not all of the masculine gender. The miscalculators and persons of poor judgment are not confined to one sex, and wom-

en oftentimes woefully waste the hard-earned dollars.

Here is an instance, related by one acquainted with the facts in the case: Mr. Jones is a hard-working man with no expensive habits aside from smoking, and as he is content with a pipe, indulging in only an occasional cigar, this does not count up very high at the end of the year, although we will readily grant that the money might better be devoted to something else.

Mrs. Jones does nearly all the buying for the family, and she selects whatever happens to take her fancy, if it is at all within her means at the time. She is seldom known to go home from a shopping expedition without having made some purchase that may be denominated as foolish. She will take a week's wages to make the first payment on a wheel for her young daughter even though shoes may be sadly needed by the whole family. When a cake or a pie is baked as likely as not she will cut out pieces for herself and all the children as soon as it is out of the oven, leaving not enough for the meal for which it was intended. Desicated cocoanut, chocolate, raisins, etc., the children run to at any time and eat of them freely as long as they last. The new frocks are worn every day when still good enough for nice, and the old ones hang around unwashed and unworn, finally finding their way to the rag-bag long before their period of usefulness should have been ended. These are a few of the ways in which one woman mismanages.

* * *

Frequently it is these minor matters, as they are generally considered, which constitute the chief difference between two families as regards their worldly prosperity. A blessing indeed to any man is a wife who "looketh well to the ways of her household." Solomon was wise enough to realize her worth and he ought to know, since his experience with wives was quite extensive.

But where there is one such as Mrs. Jones there are many who are her opposite. Women, particularly farmers' wives, as a rule are careful in their management of household affairs and study to make the most of the resources at their command. For downright economy and desire to help along in every way possible, commend me to a woman every time—or at least most every time. I firmly believe that could they have the handling of all moneys accruing from the farm there would be fewer mortgages than at present.

A NEW COMER.

Dear Sisters:—I thought I would make you a call and talk about rag carpets. Why make them at all? You can buy carpets so cheap and when they have their annual sales you can get a good bargain.

The finest rugs I have seen were made out of old Paisley shawls. They were woven three-fourths of a yard wide and one and one-half yards long; the warp and border were brown. Another one (of rags) has the center black, the border brown and red.

I want to tell the young housekeepers to put the sugar in the crust before you put in the fruit when you are making pies. And in washing, when water is scarce, wash your white clothes first, then take a crash towel and strain the suds and wash your flannels and black clothes. They will not show lint. Use plenty of borax for flannels.

Always keep turpentine in the house,

If you have pleurisy bathe the part af-

fected and rub thoroughly and cover

with a hot flannel. If you have a felon

coming, wet it with turpentine and

sprinkle salt on several times a day

and it will kill it. Boils can be driven

away by rubbing them with it, and if

the children spill ink on their clothes,

wet the spots with turpentine and they

will soon wash out.

And don't nag John to death to set out berry bushes without you can see

some help in sight to pick them. I had

a neighbor who had a fine lot of berries

last year and it looked as though

they would go to waste. The baby

was taken sick; there were two older

ones to look after, and John working

early and late to save the expense of a

hired man so he could fix up the house.

While they were feeling blue a friend

of theirs from the city came to visit

them. Her little girl was sick and the

doctor ordered a trip to the country.

That city woman put on a print dress

and went to work. She picked berries and canned them, and the children got rosy and strong.

When you pick your cucumbers this year don't lay them down in salt. They are so much nicer to put them right into vinegar. Put plenty of horseradish root in to keep the vinegar. The horseradish prevents scum from forming on it.

I wish we might all meet our editor and tell her how much we enjoy her Chats.

AUNT DEB.

SOME PRETTY SUMMER DRESSES.

I am going to write about some pretty dresses that a friend has just brought from New York. First is a black silk. It is not the heaviest, but a summer silk. The skirt measures four yards around the bottom. The fullness is gathered all at the back. Under the gathers is fastened a very small pad made of haircloth, sewed so as to form three puffs going across and sewed on a small piece of cambric. Around the bottom of the skirt are two ruffles of two-inch-wide black satin ribbon. These ruffles are not full, and the ribbon is gathered just the least bit from the edge and are sewed on the skirt by hand. The first ruffle is put on about three inches from the bottom of the skirt, and the second one is two and one-half inches above that. On the inside of the skirt is a blue silk bias ruffle, two and a half inches wide, not very full, and gathered at the edge, no heading. The bottom of this ruffle goes to the edge of the skirt and shows when the skirt is lifted. The waist is a very short basque, faced at the bottom, plain back. The front from the shoulders to the depth of six inches is a shirred yoke of light blue silk. The stock collar is shirred and closes at the back under a small bow. These are of the blue. The front of waist is closed with hooks and eyes, and below the blue silk the waist is plain. A wide girdle of blue silk, shirred, goes around the waist. The sleeves are medium tight, and at the top is a large puff, like the leg-o'-mutton. They are cut in one piece. At the wrist is a ruffle one and a half inches deep, of black silk, and under this a blue silk ruffle, same depth.

A dark blue summer serge has the front gore tucked. The tucks are one and a quarter inches deep, commencing three inches from the bottom of skirt and reaching to the waist. The tucks are three inches apart, and are run by hand. The tucking is done before the breadth is cut. A plain short basque with tiny black buttons, plain standing collar, close-fitting sleeves, with puff at the top. The jacket for this suit is short, plain back, loose fronts. The collar is turned over. Sleeves are plain at bottom with good-sized puff at top. Under this jacket is worn a plain shirtwaist, without sleeves, made of the serge.

A pretty dress is of thin muslin, white with light purple vine. A gored skirt reaches to the knees. At the edge of this is a straight flounce of four widths of the muslin, with a hem four inches wide. This deep flounce is covered with narrow ruffles of the muslin. The ruffles are straight, two inches wide, a very narrow hem, and each is edged with white lace half an inch wide. Allow half fullness in the ruffles and gather so as to allow the least bit of a heading. Put the lower ruffle on where the hem is sewed, the next so that the lace will be one inch above the lower ruffle, and so on until the straight flounce is covered, and put one ruffle on the gored part above the flounce. With this is a shirtwaist gathered quite full on the shoulders and at the waist line both back and front, the gathers at the waist line being stitched to a strap. The waist is worn outside of the skirt, and is finished at the bottom with a ruffle same as on the skirt. The sleeves are a small shirt sleeve, gathered into a narrow wristband, and a ruffle, same as the others, falling over the hand. At the top, and going entirely around the sleeve, are three ruffles, same as others. The top one is sewed in with the sleeve, and all are one inch apart. The neck is finished with a narrow stock, shirred, of purple silk, same shade as the vine in the goods. Around the waist is a belt of the silk fastened at the left side under a bow, with short ends, of the same.

A fancy waist made of dark red, very fine, thin serge, trimmed with the narrowest worsted braid, is very pretty. The back is made plain without

seams, and long enough to cover the waistband of the skirt. The lining in the front is tight fitting and hooked. In the front is a plain piece of the serge. This is fastened under the collar at the right side, and crosses to the left and is hooked. This piece at the neck reaches to the shoulder seams and is slanted to a point at the bottom, reaching to the waist, where it is held in place with a hook and eye. On this are rows of the black braid, going across, put on half an inch apart. The outside fronts are very full, gathered full length of the shoulders, and at the bottom of the waist gathered into one inch space at each side, with two rows of gathers. The fronts look full and bag slightly. These fronts are trimmed across with the braid, the rows half an inch apart; this reaches to where the gathers commence. At the back are two rows of braid forming a pointed yoke. The sleeves are small at the wrist with two rows of braid near the edge; at the top is a large puff with three rows of braid dividing the puff on the length. The collar is high, standing, with four rows of braid. It closes at the front.

CLARA.

MOUNTING PICTURES AT HOME.

No doubt we all have one or more pictures which we would like to see framed yet hardly feel like going to the expense of purchasing frames for. These may be mounted in the following manner and present a very pleasing appearance, at slight expense.

Procure a pane of glass one inch or more larger all around than the picture, says an exchange. Give the face of the picture a very thin coating of varnish or enamel, then place it exactly in the center of the glass, face down, exactly where you wish it to remain. With a soft cloth press the back of the picture carefully until it adheres perfectly to the glass and every air bubble is removed. Do not move the picture the least bit after having once placed it on the glass.

To finish the edge of the glass and provide for hanging, procure four brass rings a little smaller than a silver quarter. With a pair of pincers bend them exactly across the center, forming a perfect crescent, allowing just room for the corner of the glass to enter the space between the wires. Place a crescent over each corner of the glass and connect them with pieces of small brass chain along the edges of the glass. They may be hung by a bit of the chain.

The margin of clear glass may be decorated with a hand-painted vine.

SPARE MINUTES.

In a child's autograph album over the single word, "Marthy," stood a crag with a crow perched on its summit, one leg drawn up, and his head canted dolefully to one side.

"Did you do that, Mat?" someone asked laughingly; "is it meant to represent yourself?"

"Of course. Isn't it life-like?"

"You'd make your fortune drawing caricatures for some of the big papers. Why don't you try it?"

"Never thought. I wouldn't know how to get into them, anyway."

"Why, all you'd have to do would be to draw something like that, with some great politician's face on it instead of yours—the man and the bird would need similar characteristics, to be sure; a snake in the grass wouldn't represent one whose dealings are all open and above board—and send it, first to one paper, then to another, till you find a purchaser. I would, if I had your talent."

Mat didn't follow her friend's advice, she had too humble an opinion of her gift; but the conversation set her to thinking. Every paper and magazine was crowded with advertisements and she knew that such work commanded a good price. Many of the advertising columns contained mere stories, not cleverly told, and without "catchy" pictures. She studied the poorest specimens and the best, and decided that she could produce better work than the average. Happening upon a plain statement of the virtues of an advertised household article, she made a sketch of a kitchen interior, its mistress in throes of perplexity as she tried to work in the old-fashioned way. When this was finished to her satisfaction she sketched the same kitchen with the same mistress triumphantly using the little invention. Remember-

ing directions that she had once read, she enlarged her pictures to four times the size needed, and showed them to her sister Kate. Kate had long essayed to "write for the papers," without success.

"Kate," she said, "you know we read that writers of advertisements who cannot draw hire an artist to illustrate their articles. Now, I'm going to reverse it. I can draw, but I can't write, so I'll hire you, and pay you when I get it, if I ever do. I want the most 'taking' story you can write, to 'illustrate' these pictures. It must be condensed, to be sure, but 'catchy.'"

Kate wrote and wrote, until the result pleased Mat, and they sent their work to the selected advertiser, with Kate's most business-like letter. It was accepted, and their pin money was a certainty. Henceforward Kate wrote the "ads" and Mat illustrated them. Or, when Mat was busy, Kate made her camera take the place of her sister's ingenuity, or offered her "ads" without illustration. And often Mat added a few appropriate words of her own to her pictures and mailed them independently of her sister's aid. They are self-supporting women, and will not "marry for a home."

L. L. TROT.

FARM DINNERS.

I have seen so many farmers' wives that served the same dinner day after day, that I wonder that everyone does not get sick of the farm. "But," one woman said in astonishment, "if you had nothing but pork and potatoes, how would you vary your dinner?"

"I should do it even on those things," I answered decidedly.

After finding out what her resources were, the following is the menu I prepared for her for one week:

Monday: Smoked ham, mashed potatoes, turnips cooked in milk, cabbage salad, white bread and butter, mince pie, tea.

Tuesday: Fried pork, baked potatoes, stewed tomatoes, fried onions, graham bread and butter, rice pudding, tea.

Wednesday: Fresh ham, boiled potatoes, fried cabbage, turnips and oiled with pork, white bread and butter, berry pie, tea.

Thursday: Side pork fried in batter, scalloped potatoes, stewed cabbage, boiled onions, white bread and butter, strawberry shortcake with cream, tea.

Friday: Boiled ham, potatoes cooked in their jackets, turnips with sauce, tomatoes, white bread and butter, graham pudding with syrup, tea.

Saturday: Fresh pork, fried potatoes, cold slaw, baked pork and beans, graham bread and butter, apple pie, tea.

Of course if my friend had had squash, carrots, beets, parsnips, etc., the bill could have been still more varied, but I was working with the material in hand. The tomatoes and other fruit were canned. If you have ever so little try and vary your dinner as much as possible.

Turnips cooked in milk: Chop turnips fine and cook until tender, then drain off all water, add seasoning, milk, and a generous piece of butter.

Pork fried in batter: Make batter as for fritters. When pork is done dip slices in this batter and fry again.

Graham bread: One egg, two cups sour milk, soda to sweeten, half cup molasses, graham flour to make a stiff batter. Bake in a slow oven.

Cold slaw: Chop cabbage fine, add a little salt, vinegar, sugar and some sweet cream. A few slices of cold boiled egg or beet pickle may be placed on top.

IRMA B. MATTHEWS.

A PRETTY COUCH COVER AND PILLOWS.

A pretty and easily-made cover to protect a nice couch, or cover up the defects of an old one, is made of checked gingham, in checks about three-fourths of an inch square. The one I have is green and white and is made long enough to cover the whole couch, head and all. It is just the width of the gingham and has a ruffle six inches wide along one side and across the ends. I have a hem about an inch wide in the ruffle and a double cross-stitch in white working cotton on each dark square along the edge. Five yards will make this cover and a pillow to match. The pillow is worked on one side with the cross-stitch. The best feature about them is that they wash so nicely. Turkey

red cotton makes nice pillows for every-day use.

I saw a pair of porch pillows recently made of flags, two flags being used for each. The edges are finished plain. A lounge pillow which is both pretty and patriotic is made from dotted mull, with dots an inch or more in diameter. These dots are worked over with embroidery silk, alternately red and blue. With an appropriate ruffle of red, white and blue ribbon they are very dainty. Dotted net, with double ruffle of the same, makes a pretty cover over any colored lining and is inexpensive.

EVA.

HOLDER FOR SAFETY PINS.

An odd little ornament for holding safety pins can be made of a doll's head, satin ribbon and felt. The head is wax, with curly blond hair, and is as large as a medium-sized hickory nut. Take two pieces of the finest and thinnest white felt (flannel will do if you cannot get the felt); each piece should be five inches long and two and three-fourths inches wide. These are pinked—very fine—on both sides and one end of each. These are for the underskirt. The dress is of light blue satin ribbon, three inches wide. Cut two pieces of the ribbon, each six and a half inches long, and fringe one end of each piece three-fourths of an inch deep. This is for the bottom of dress skirt. At the other two ends fringe it the eighth of an inch and gather the two pieces in around the doll's neck. One inch below the neck sew on the plain edges of the felt pieces between the two pieces of ribbon, and draw tight, thus forming the waist line. The sleeves are gathered at the top and in shape leg-of-mutton, one and a quarter inch long. Sew them in at the sides, same as you would in the armhole of a waist. They are made of the blue ribbon and will be stiff enough to stand out without anything in them. Cross the sleeves a little at each side over the skirt just below the waist. The two pieces of felt are for holding safety pins. These holders may be put up against the wall, or put upon the dresser.

ILKA.

FAMILY SEWING.

There are so many housekeepers who are compelled to do their own sewing that the question of how to dispose of it to the best advantage is an important one, especially if the family is large.

First, it seldom pays to make over garments unless the material is very good. If it is not good the garment will not wear half long enough to pay for the trouble spent in making it over. There is such a thing as being too economical.

Do not buy expensive materials if the garments are to be worn by growing children. I think it is a good plan to dress children simply.

There are always ready-made garments to be bought, but it hardly pays to make a practice of buying them, for the sewing is generally very poorly done and they are continually rippling, but the underclothing may be bought ready made to good advantage.

It is well to begin summer sewing the latter part of the winter, although the nice summer dresses may be left to see what the summer styles will be.

Before beginning have everything handy, thread, hooks and eyes, buttons, etc. If you can have a room expressly for sewing, you will save steps and time, by not having to "pick up" three times a day. It is a good plan to have a cutting day and roll each garment by itself. The paper patterns which can be bought cheaply are quite a help to the home dressmaker.

ELIZABETH GRIFFIN.

For ringworm try sulphur and lard rubbed on the spot every few hours.

For discolorations under and about the finger nails try a little oxalic acid dissolved in a tablespoonful of water.

To make chocolate for 50 guests an authority upon the subject says take three-fourths of a pound of chocolate and, after melting it, stir it into a pint of boiling water and boil for ten minutes. Then add five quarts sweet milk and one pound granulated sugar. Strain and add whipped cream when serving.

A SERVICEABLE COUCH.

A lounge for common use, fashioned after the pattern of the couches now most frequently offered for sale, can easily be made by any woman after her husband has nailed the frame together. Select two boards or planks a foot wide and as long as the head of the house is tall, for it will be placed in the kitchen or "living room" for his comfort. Join them by nailing narrow strips on the under side. The headboard will need to be two feet long and about a foot high. Fasten it on with stout nails. Any round sticks from the woodpile, with ends smoothly sawed, will serve for legs. Peel off the bark and, either before or after attaching to the lounge, paint to match the woodwork of the room. Set in about two inches from the edge, and fasten with spikes. Casters and springs are valuable auxiliaries and can be added without much trouble. In the angle formed by the junction of head and seat tack a small cushion, to make the incline less abrupt, and over it tack a cushion of sacking filled with straw, excelsior or batting, that will reach from edge of headboard to the foot. Cover the whole with stout denim or painted canvas, tacking on the under side.

L. L. T.

GRAPE JELLY.

Use grapes not entirely ripe. When about half colored put them into a granite or porcelain kettle and heat gradually. Cook gently until soft enough to allow the juice to escape, then put into a muslin bag and hang over a large earthen crock and let it drip all night. Use no pressure whatever, and do not squeeze the bag at all while handling. In the morning measure the juice after carefully pouring it out of the crock into another, making sure to get none of the dregs, as this is the cause of crystallizing so common in grape jelly. Allow one pound of granulated sugar to each pint of juice, putting the sugar into the oven in flat dishes to heat, but be careful not to scorch it. Boil the juice five minutes, then add the sugar. Let it come to a boil and remove at once from the fire. Pour into hot tumblers. This will be very firm and nice.

Leroy.

LUCY Mc. K.

AN INCIDENT.

"How lovely you look," said one woman to another as she came to visit her hard-working friend.

"I am lovely," replied the hard-working woman with a laugh that seemed an apology for what might be thought self-praise. "Not lovely in my hard calloused hands, nor my poor

gown, nor sun-burned face, but in the possession of the divine love that all have within them."

"Do you think all have this beautifying, divine love within them? The depraved, the criminal, and vain, frivolous people?"

"Indeed, yes," promptly answered the other, "but like the besieged Santiago they have entrenched themselves so securely behind pride, sin, fashion and selfishness that their light is hidden and only the touch of the Master's hand can reveal it," and a look of pity shown in her eyes.

Instead of condemning or judging, why should we not strive to break away the barriers from so many darkened lives that their light may shine out, and beautify not only their own lives but of all who come within their influence.

BEE.

CONTRIBUTED RECIPES.

Birthday Cake.—One cup butter, two cups brown sugar, one cup milk, four eggs, two teaspoons of baking powder, four small cups of flour, one cup raisins, spices.

Ginger Snaps.—One cup lard, two cups molasses, one even tablespoonful of ginger, one even tablespoonful of saleratus dissolved in a little hot water, half a teaspoonful of cinnamon. Knead in flour to roll thin.

BEE.

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Milch cows and springers active at \$28 to \$50 each.
Clark sold Mason 4 stockers av 607 at \$3.75; 3 mixed butchers to June av 706 at \$3.60 and a cow weighing 960 at \$2.90.
Robb sold June 14 mixed butchers av 608 at \$3.60.

Baker sold Mich Beef Co 2 cows av 1100 at \$2.75; 1 do weighing 1,170 at \$3.00; a steer weighing 840 at \$4.00; 5 good butchers

steers av 1,016 at \$4.50 and 2 fat cows av 1,225 at \$3.50.

Harger sold Farnum 3 stockers av 610 at \$3.85 and 4 light butchers av 452 at \$3.45.

Weitzel sold Black 2 cows av 910 at \$2.75; 1 do weighing 850 at \$3.50, a bull to Sullivan weighing 1,340 at \$3.40 and 6 steers av 678 at \$3.90.

Stead sold Fry 7 mixed butchers av 721 at \$3.60.

Taggart sold Magee 4 bulls av 812 at \$2.80; 6 mixed butchers av 716 at \$3.65 and 2 common cows av 470 at \$2.25.

Smith sold Caplis & Co 3 mixed butchers av 688 at \$3.75.

Hawley sold Mich Beef Co 17 mixed butchers av 690 at \$3.80 and 6 stockers to Farnum av 700 at \$3.80.

Murphy sold Mich Beef Co 7 mixed butchers av 643 at \$4.00.

Estep sold Farnum 3 stockers av 653 at \$3.80; 2 cows to Caplis & Co av 1,075 at \$3.20 and 5 steers av 800 at \$4.30.

Patrick sold Caplis & Co 2 cows av 950 at \$3.25; 1 do weighing 1,170 at \$3.30; a heifer weighing 690 at \$4.00 and 7 steers av 892 at \$4.25.

Bishop sold Sullivan 31 stockers av 631 at \$3.85.

Bellheimer sold Mich Beef Co 2 cows av 1,140 at \$3.25; a steer weighing 790 at \$3.85 and a heifer weighing 830 at \$4.00.

Kalaham sold Black a cow weighing 1,220 at \$3.00 and 2 bulls to Reagan av 780 at \$3.124; also 15 stockers to Farnum av 662 at \$3.85.

Robb sold Farnum 6 stockers av 786 at \$3.85; a bull weighing 670 at \$3.00 and 2 cows to Caplis & Co av 1,100 at \$3.60.

Bergen & T sold Black 3 cows av 1,126 at \$3.75 and a heifer weighing 1,040 at \$4.40.

Bunnell sold Farnum 7 stockers av 581 at \$3.75 and 2 steers to Sullivan av 770 at \$4.00; 6 steers to Mich Beef Co av 1,121 at \$4.60; 2 cows av 1,210 at \$3.50 and 1 weighing 1,060 at \$2.60.

Glenn sold Mason 4 stockers av 530 at \$3.25 and 7 mixed butchers av 921 at \$3.10.

Sharp sold same 4 stockers av 762 at \$3.90.

Lovewell sold Farnum 1 steer weighing 690 at \$3.90; 1 do to Caplis & Co weighing 960 at \$4.45 and a heifer weighing 780 at \$4.00.

Murphy sold Farnum 8 stockers av 691 at \$3.95 and 4 bulls to McIntyre av 730 at \$3.40.

Bunnell sold Goff 6 stockers av 528 at \$3.40.

Lomason sold Sullivan 3 steers av 1,110 at \$4.50; 3 stockers to Mason av 606 at \$3.85; 3 mixed butchers to Black av 776 at \$3.90; 4 do av 960 at \$3.25 and a cow weighing 1,120 at \$2.50.

Mayers sold Sullivan 22 stockers av 785 at \$3.85.

SHEEP AND LAMBS.

Receipts, Thursday, 1,025; one week ago, 971. Market active and 10 to 15c higher for lambs. Fair to good mixed butchers strong to shade higher. Range of prices: Lambs, \$5.00 to \$5.75; good mixed lots, \$4.50 to \$5.00; fair to good mixed butchers, \$3.35 to \$4.40; culs and common, \$2.75 to \$3.35.

Weltzel sold Mich Beef Co 16 lambs av 71 at \$5.50 and 5 culs av 112 at \$3.90.

Spicer & Merritt sold Dold Packing Co 17 lambs av 70 and 47 av 64 at \$5.60; 18 do av 71, 17 av 67 and 80 av 64 at \$5.50; 8 fat butchers av 111, 16 do av 127, 19 do av 92 at \$4.00 and 12 do av 97 at \$3.75.

Butler sold Mich Beef Co 17 lambs av 80 at \$5.75.

Kalaham sold Young 11 lambs av 81 at \$5.50 and 9 yearlings av 89 at \$4.25.

Glen sold Fitzpatrick 26 lambs av 50 at \$5.00.

Bellheimer sold Young 7 lambs av 79 at \$5.50.

Stephens sold Coats 11 lambs av 83 at \$5.75 and 14 mixed av 90 at \$4.00.

Spicer & M sold Monaghan 8 lambs av 65 at \$5.30; 11 mixed av 74 at \$4.50 and 24 lambs to Fitzpatrick av 74 at \$5.50.

HOGS.

Receipts Thursday, 3,603, as compared with 2,507 one week ago; mostly grassers and common. Market active; best lots sold early at strong last Friday's prices; common slow and weak. Range of prices: Fair to good mediums, \$3.80 to \$4.00; grassers, \$3.70 to \$3.75; pigs, \$3.40 to \$3.65; stags, 1-3 off; roughs, \$3.00 to \$3.25.

Coats sold Kenner 19 pigs av 73 at \$3.60.

Shark sold Sullivan 25 pigs av 96 at \$3.60.

Glen sold same 103 av 158 at \$3.72½ and 42 av 96 at \$3.40.

Adams sold same 49 av 152 at \$3.75.

Kelsey sold same 58 av 157 at \$3.72½.

Burden sold same 68 av 157 at \$3.70.

Bandfield sold Parker, Webb & Co 91 av 163 at \$3.80.

Taggart sold same 33 av 166 at \$3.70.

Patrick sold same 113 at 159 at \$3.75.

Lamoreaux sold same 73 av 168 at \$3.75.

Clark sold same 38 av 180 at \$3.80.

Smith sold same 73 av 177 at \$3.75.

Estep sold same 54 av 168 at \$3.80.

Lovewell sold same 21 av 219 at \$3.75.

Nixon & McMillan sold same 92 av 181 at \$3.80.

Lomason sold same 21 av 184 at \$3.80.

Johnston sold same 61 av 158 at \$3.80.

Stephens sold same 125 av 176 at \$3.75.

Weitzel sold same 110 av 194 at \$3.75.

Kalaham sold same 48 av 181 at \$3.80.

Knapp sold same 32 av 153 at \$3.75.

Rook sold same 42 av 206 at \$4.00.

Smith sold R S Webb 17 av 200 at \$3.90.

Friday, Aug. 19, 1898.

CATTLE.

Receipts Friday, 248, as compared with 214 on week ago. Quality not very good. Market active and strong for good handy butchers and stockers, common slow and weak. \$4.75 was top price to-day for 4 choice butchers steers av 1082 lbs., and \$1.50 for 7 av 972 lbs., balance as noted; stockers active and strong to shade higher. Veal calves steady. There is a good demand for good fresh young milch cows and springers; not many here, receipts mostly common; closed slow and weak.

Spicer & Merritt sold Kamman 5 mixed butchers av 662 at \$3.50; 2 common av 93 at \$2.25, 14 feeders to Sullivan av 190 at \$4.10, 2 choice steers av 895 at \$1.70, 6 stockers to Jackson av 475 at \$3.20 and 3 common av 850 at \$2.25.

Furden sold Sullivan 9 feeders av 846 at \$2.90.

Roe & Holmes sold Mich Beef Co 9 steers av 1033 at \$4.50; 5 do av 940 at \$4.50, 4 mixed butchers av 825 at \$3.65, 3 feeders to Sullivan av 800 at \$3.90; 12 do av 916 at \$4.15, 4 cows to Black av 1055 at \$2.75 and 1 do weighing 1050 at \$2.50; 3 stockers to Farnum av 740 at \$3.85; 6 do to Jervise av 661 at \$3.60 and 4 do to Mich Beef Co av 537 at \$3.25.

Major sold Sullivan 10 stockers av 695 at \$3.85, 3 light butchers to Kamman av 553 at \$3.35 and 6 do to Mich Beef Co av 595 at \$3.50.

Fox & Bishop sold Marx 3 steers av 880 at \$4.00 and 4 mixed butchers av 865 at \$3.40.

Dunlavy sold Caplis & Co 2 steers av 770 at \$4.25.

Sutton sold Sullivan 3 steers av 1023 at \$4.35.

Spicer & M sold Mich Beef Co 6 fat cows av 1186 at \$3.50; 7 stockers to Farnum av 770 at \$3.85 and 1 weighing 510 at \$2.75.

Roe & Holmes sold Mich Beef Co 2 cows av 1055 at \$2.75; 1 do weighing 1090 at \$3.00; 2 do av 935 at \$3.50; 3 mixed butchers to Cook av 723 at \$3.50; 2 stockers to Mason av 475 at \$3.00, and 4 do to Fry av 582 at \$3.00.

Farmer

O'Connor sold Caplis & Co 6 heifers av 791 at \$3.90, and 12 stockers to Sullivan av 610 at \$3.80.

Hyman & Son sold Sullivan 25 steers av 965 at \$4.35.

Burden sold Marx 5 heifers av 728 at \$3.60, and 2 cows av 900 at \$3.15.

McLaren sold Caplis & Co 4 choice butcher steers av 1082 at \$4.75; 4 bulls to Sullivan av 1025 at \$3.00, and a steer weighing 770 at \$3.75.

Moore sold Mich Beef Co a bull weighing 1610 at \$3.25; 5 mixed butchers av 684 at \$2.75; 2 steers to Caplis av 790 at \$3.90; 2 bulls to Mason av 650 at \$3.90.

Spicer & M sold Cook a bull weighing 960 at \$3.00; 4 mixed butchers av 667 at \$3.50; 2 steers av 810 at \$4.30, and 9 mixed butchers av 687 at \$3.50; also 5 light butchers to Reagan av 486 at \$4.10.

Dunlavy sold Sullivan 5 av 490 at \$2.75.

Armspoker sold Sullivan 5 steers av 944 at \$4.25, and 3 cows to Black av 1133 at \$3.15.

Roberts & Spencer sold Farnum 3 cows av 816 at \$2.40.

Miller sold Caplis & Co 7 steers av 972 at \$4.50.

Spicer & M sold Sullivan 21 steers av 900 at \$4.00.

Roe & Holmes sold Mason 5 bulls av 532 at \$3.75; 7 stockers av 547 at \$3.75; 4 do av 525 at \$3.00; 6 do av 435 at \$3.75; a bull weighing 150 at \$3.00; 1 do weighing 770 at \$3.00; 4 stockers av 607 at \$3.75; 2 do av 625 at \$3.50, and a canner weighing 830 at \$1.50; 5 heifers to Robinson av 780 at \$3.90; a bull weighing 1450 at \$3.50; 1 do weighing 850 at \$3.00, and 3 mixed butchers av 726 at \$3.75; 17 mixed butchers to Kamman av 880 at \$3.85; 5 steers to Sullivan av 790 at \$4.00; 2 bulls av 1235 at \$3.25; 8 do av 845 at \$3.95; 4 stockers to Parke, Davis & Co av 487 at \$3.50, and 6 mixed butchers to Fry av 696 at \$3.70.

SHEEP AND LAMBS.

Receipts, Friday, 788; one week ago, 149. Market opened fairly active at about yesterday's prices; later was slow and lower, closing dull, and 20 to 25c lower than above quotations.

Roe & Holmes sold Mich Beef Co 33 lambs av 75 at \$5.60; 106 most lambs av 62 at \$5.00, and 68 do to Robinson av 62 at \$5.25.

Coats sold Mich Beef Co 27 fat butchers av 95 at \$4.00; 62 lambs av 65 at \$5.75, and 31 do av 70 at \$5.75.

Nixon sold same 21 lambs av 64 at \$5.50.

Underwood sold Mich Beef Co 22 lambs av 67 at \$5.50.

Luckie sold same 41 av 60 at \$5.35, and 5 sheep av 74 at \$4.00.

Roe & Holmes sold same 62 lambs av 80 at \$5.60.

Fox & Bishop sold Heiser 13 mixed av 84 at \$4.50.

Davenport sold Mich Beef Co 29 lambs av 65 at \$5.50, and 14 yearlings av 73 at \$4.25.

Roe & Holmes sold Robinson 20 mixed av 90 at \$3.75.

Griffin sold Sullivan Beef Co 30 mixed av 94 at \$4.00.

Armspoker sold Monaghan 29 mixed av 74 at \$3.35.

Cassey sold Mich Beef Co 12 common av 87 at \$3.00.

Eddy sold Fitzpatrick 125 mixed av 80 at \$3.75.

Spicer & M sold same 95 mixed av 78 at \$4.25.

Dunlavy sold Monaghan 54 mixed av 73 at \$3.50.

Vickeray sold same 20 mixed av 83 at \$3.70.

HOGS.

Receipts, Friday, 2,698; one week ago, 2,224. Quality mostly grassers. Market fairly active; best lots sold 5c lower; common and grassers very dull—not wanted. Several loads shipped through in first hands.

Stevens sold Farnum 8 av 226 at \$3.95.

Leidel sold Hammond, Standish & Co 48 av 218 at \$3.87½.

Underwood sold same 55 av 187 at \$3.80.

Denton sold same 73 av 221 at \$3.90.

Roe & Holmes sold same 82 av 184 at \$3.75; 36 av 168 at \$3.70, and 49 av 156 at \$3.72½.

Ramsey sold same 105 av 168 at \$3.70.

Brown sold same 64 av 192 at \$3.75.

Hauser sold same 57 av 156 at \$3.70.

F W Horner sold same 69 av 189 at \$3.82½.

Devine sold same 83 av 170 at \$3.70.

Spicer & M sold same 64 av 176 at \$3.70.

Cassey sold 71 av 188 at \$3.70.

Sutton sold Sullivan 25 pigs av 82 at \$3.40.

Fox & B'shop sold same 22 pigs av 114 at \$3.60, and 112 av 167 at \$3.72½.

Major sold same 39 av 159 at \$3.75.

Griffin sold same 52 av 168 at \$3.70.

Parsons & H sold same 67 av 177 at \$3.72½.

Spicer & M sold same 28 pigs av 104 at \$3.55.

Armspoker sold same 25 av 150 at \$3.65.

Davenport sold Parker, Webb & Co 57 av 184 at \$3.75, and 12 pigs av 91 at \$3.5

Miscellaneous.

SUNSET FROM SHORE.

White sails turned pink, pows grew gold,
And spars were made of light,
On seas whose molten sapphire rolled
Far out to meet the night.

The mountains caught on crested crown
Pale amethyst and blue;
And deep in hollows gray and brown
The mist-veiled shadows grew.

Through long ravines the scarlet fire
Burnt like a ruby red.
And flamed on crimson wings still higher
The cloud host overhead.

Far to the east faint green in bars
Edged the sea's mystery.
And in the amber sky the stars
Awaked to ecstasy!

—Harper's Bazar.

JUST DO YOUR BEST.

The signs are bad when folks commence
A-findin' fault with Providence,
And balkin' cause the earth don't shake
At every prancin' step they take.
No man is great till he can see
How less than little he would be
If stripped to self, and stark and bare
He hung his sign out anywhere.

My doctern is to lay aside
Contentions, and be satisfied;
Jest do your best, and praise er blame
That follers that counts jest the same.
I've alius noticed great success
Is mixed with troubles, more or less,
And it's the man who does the best
That gits more kicks than all the rest.
—James Whitcomb Riley.

THE LOVER'S QUEST.

BY ERNEST GLANVILLE,
Author of "The Lost Heiress," "The Fossicker,"
"A Fair Colonist," "The Golden Rock," &c.

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(CONTINUED)]

"Ah," said Miles, "that sounded like a hoof-beat."

"It is so, my baas. Will the master fight? If they take him he will live, but me they will give to the tiger, I know."

"We must fight, Hans. Here, take this belt of cartridges and hand me the charges as I may want them."

"That is my baas," and the old man began to cry. "Ek es ne bang, baas. I cry always when I fight. Voetsack ye verdmole cat!" he shouted, as the cry once more burst out.

There was no mistaking that terrible sound now for anything but the yell of the furious beast they dreaded, and Miles felt his hair stir as he stood with his weapon ready, and his eyes fixed on the circle of light about the still blazing fire. They heard clearly the rattle of pebbles, the soft thud of the great paws, and a low, menacing grunt, then one shrill whistle, followed by intense silence.

"There is a man there," whispered Hans.

"Yes, he called the tiger off."

"Neh, sieur; he called the tiger to go slow. Now he will be creeping up."

The silence seemed to deepen, but in vain they tried to catch the faintest sound, and in every spot of black, in every waving bush and stone, they saw a crouching form stealthily approaching.

So they stood till their eyes wearied of the strain, and Miles set his gun down, for the fierce grasp on the stock had benumbed his fingers. Then, picking up the weapon again, he stepped softly to the fire, and threw a flaming brand into the darkness, and fell back with his finger on the trigger. There was no response to this challenge, save a complaining whimper from a hungry jackal, and he went back to the rock puzzled.

"Bass," whispered Hans, "the beast is back of us. He is watching while the man has ridden away for help."

"How do you know?"

"It must be so. He would strike our wind, and when the whistle sounded he would see us. I know his eyes are on us now, where he lies low with his chin on the ground."

"We will walk him up, then," said Miles, firmly, and he stepped out into the dark, with his back to the fire, feeling away with his feet, while Hans kept close beside him, with the point of his crooked blade up.

Slowly and anxiously they quartered the ground to the right, then to the left, then made a circle with the fire for the center, but not a sign or a sound did they see or hear of either man or beast, and they took their bearings from the Southern Cross and walked steadily away. With many a halt to look behind, they walked right into the eye of the morning. As the light grew they turned wearily to look behind, and from their feet to the hori-

zon there stretched a level arid plain, unfolding mile on mile as the mist was rolled back by the sun. No living thing was there. The hard ground held no trace of footprint, and they threw themselves by the side of a tall ant-hill, with their bodies in the direct gaze of the sun, for the raw air chilled them to the bone.

"Why did we run away last night?" said Miles, thinking they had been scared at nothing. But the Hottentot made no reply. His chin had fallen forward and he was sound asleep. Miles felt unconsciously in his pocket for food, and in the absence of a single date, filled his pipe and smoked, with his thoughts going back to that day in Wales beside the little lake. Then he remembered Stoffel, and the hint Hans had given him of his home-building far south, and he sighed in his helplessness.

"What's dat?" said Hans, leaping to his feet and glaring round.

"Nothing, Hans."

"I did think that Amol was catching me by the throat, and holding me while the tiger come up."

"I should like something to eat," said Miles, looking round over the plain for a sight of a bird. "If we find water we will find game, and from the slant of these old water marks I think we will march in that direction," pointing to the right.

"That is right, baas."

They started off on a long tramp, stripping their coats off presently, when the sun grew stronger, but keeping steadily on till noon found them in a dry donga, with a few ragged thorns clinging to its banks, and here and there a patch of withered reeds. Going down the bed they at last came upon a stagnant pool, hollowed out from the bank, with a wide margin of dry mud, and a narrower margin of green slime reeking in the heat. It was not inviting, and Miles looked at the thick, evil-smelling liquid with disgust, but Hans studied the ground carefully, with a hunter's eye.

"See here, baas," he said, pointing to old hoof marks on the dry belt, "the buck have not been to drink. There must be better water near."

So they went warily on over the hot sand, and came upon a large pool under the shelter of a great rock, and protected from the sun by a roof of palms and tree ferns, while on the near border was a thick growth of tall grass.

They ran forward, and were soon flat on a shelving rock, drinking great draughts of cool, sweet water.

CHAPTER VIII.

Miles Venning then mounted to the top of the wall with his rifle in the hope of getting a shot, but there was no stir in the thin scrub, and even a wider beat discovered no sign of horn or feather.

"It is no use, baas," said Hans. "The buck have gone far to feed, and we must go hungry till the night, when many will surely come to drink."

There was a low tree growing on the side of the pool, opposite the sloping rock, and here, under the branches, Hans built up a screen with the broad leaves of the palms. Here they were to sit in the dusk in the hope of bagging the meal of which they stood so greatly in need. Here, too, Miles slept through the hot afternoon, being quite worn out, while Hans snored in the full blaze of the sun. From this sleep they woke famished with hunger, and Hans passed the time till dusk gathering dry sticks for the fire later on, when there would be venison steaks for the coals. Then he studied the ground, to see by what paths the game approached the water, and assured Miles with great glee that, with the wind passing down the bed of the stream, the buck would not get their scent, as they were evidently in the habit of approaching the pool upstream. Miles did his share of the preparations by fixing a small strip of white fibre round the foresight and removing all the dry twigs under the tree that would crack if trodden on.

"Shoot him dead where he stands," said Hans, with a ferocious glare, as though he already scented a supper. "All right," said Miles, seriously. "I will not pull trigger till I am sure I have him."

Then the darkness crept on, and long before it was necessary they took up their positions in the screen, and began a long and wearying watch, which, however, was not without use, as, while there was yet a little light, they took notice of all the marks on the

opposite side where the game would approach the water.

For a full hour there was no break in the silence; then they heard a slight mew, and the sound of lapping, though they could not see the animals that made the noise. Another long spell, followed this time by the whine of a hyena, who evidently had his suspicions, and whose presence there would certainly keep the antelope off. Finally, however, he went off upstream, with a maniacal laugh, which set a troop of jackals howling. Then, after a pause, there was the joyful sound of a sharp blow given on the ground almost above them—the impatient stamp of a buck. Hans reached out, and touched his silent companion, and Miles slowly raised his rifle, for the moment was at hand. The buck, however, several times struck the ground with his hoof, but he had not yet given the signal to his family that all was safe, and the two watchers grew alarmed lest he must have caught the scent, when they heard a heavy sigh, and were astonished to see some vast form loom up outside, whose approach had been so quiet that they had heard no sound. Next they heard the gurgle of water down his throat, and Miles made out the form of a rhinoceros. This was not the game they wanted, and there was nothing left for them but to wait for the unwelcome visitor to move. This, however, he was in no hurry to do; for after drinking, he struck the water with his huge forefoot, then with a great sigh went down on his side, causing the water to run in a wave almost up to the place where they knelt. So long he layed that Miles was almost tempted to fire, while Hans swore under his breath, and whispered that even rhinoceros flesh was better than nothing. Miles, however, resisted, and at last the brute struggled to his feet and took a bite at the tall grass.

"Verdam!" whispered Hans "will he stop here all night?"

The rhinoceros turned his head for a long stare at the screen, then, with a vicious snort and toss of his horned snout, went slowly off.

"Now," said Miles.

"Ja, sieur," repeated Hans.

Once more they heard the stroke of the hoof, then a slight fall of earth and the rustling of tall grass, and a fine buck, with long, straight horns, stepped up to the pool, while behind him were other shadowy forms.

Miles held his rifle steady, and was waiting for the buck to drop his muzzle into the water, when, without a moment's warning, the animal sprang across the pool and leapt the bank, the rest breaking back with a wild rush.

"My Gott!" cried Hans in a scream. "They have gone!"

"What frightened them?" said Miles in a tone of bitter disgust, as his anger flamed up.

"It must be that dog of a wolf!"

"I wish I had fired!"

Then they prepared for another watch, with the patience of men who have much at stake, and for a time their whole world was that little pool, with its narrow margin. They had not long to wait, however, for they had scarcely settled down when they heard the low growl of a leopard coming down stream against the wind.

"It is he frightened the bok," muttered Hans. "Verdam, everything goes bad. He gets our wind now, and he don't like it as the smell of a buck. Wow! He is angry!"

The leopard with a spring alighted out of the tall grass beyond on to the shelving rock, and with another bound reached the bank above them.

"He is after the buck," muttered Hans, "and maybe now we will get our supper."

They stirred uneasily as they heard the animal move around to the back of them, and sniff at the bushes.

"It is us he is after," thought Miles, looking around over his shoulder.

The next moment they gave a nervous start, while the blood ran cold within them, for through the silence there rang the low whistle they had heard the previous night. The Arabs were still hunting them down! That thought flashed through their brains, and in their famished condition, after the first shudder of fear, they were hot with rage.

"I am not to be caught here," said Miles, "like a rabbit in its hole," and he crept up the bank through the bush, pushing his rifle before him. A threatening growl greeted this movement, but he kept on to the top, pausing a moment before breaking cover. There

was a low suppressed snarl. It seemed to come from a dark patch almost level with his eyes and, taking another step, he fired. Then he stepped out with his finger on the other trigger. No sound followed the startling smack of the report. If there were Arabs near they made no sign.

"This is duivel's work," said Hans, hoarsely, as he stepped out, and the two of them stood listening for the mysterious pursuers who seemed ever to keep out of sight.

Then, with a hideous scream, the leopard revealed his presence, while the two men were rolled over by his spring, and even as they fell they heard a shrill whistle ring out upstream. The rifle went spinning out of Miles's grasp, as he was hurled crushing into the bush down the bank, but he quickly regained his feet, and forced his way up, bleeding from innumerable scratches, and as he reached the bank again he heard a strange gurgling noise, and saw a dark form dragging at something. He kicked against something. It was the sword. He picked it up, and with a bound overtook the brute. Before it could turn, he made a terrific blow, with the fury of desperation, and the blade seemed to pass down without resistance, so that with a wild cry he struck again and again. But there was no need. The first blow had completely severed the huge body. The back of the leopard, as the blow descended, had been stretched out by the weight of the burden carried, and the keen blade entering between the joints in the spinal column, had been driven clean through.

Hans staggered to his feet, while Miles stood still with heaving breast, half-unconscious of what he had done, and then the sound of rushing hoofs acted like a galvanic shock. He lifted the dazed Hottentot in his arms, and carried him to the bush.

"All right, baas," grunted Hans. "I only silly in my head," and, wriggling loose, he crawled down to the water, into which he slid, while Miles groped about for his rifle. He found it fixed in the tree, by knocking his head against the barrel, and then, as his hand closed over the stock, his coolness returned. The horsemen were near at hand, and calling to each other as they stretched evidently from the bush into the plain. Reaching the water, Hans called softly.

"Ja, baas. Ek is better—but my knife?"

"Here it is," said Miles, thrusting the bloodstained blade forward. "Now be silent."

There was a hollow sound as a horseman approached along the bank. Then the horse swerved, evidently with a loud snort of fear.

"Mash Allah!" cried the startled voice. "What have we here?" The man dismounted. "Nimr! Nimr! Sheitan! What a blow!"

At his voice others rode up, and from their startled exclamations, it seemed they had gathered round the severed body of the leopard. Then there followed sharp words of command. There was the sound of men riding forward and across the river bed, and presently the voices of others on foot, coming down the bed itself, while a couple of rifles were emptied at venture into the bushes about the pool.

The two edged along the bank upstream until they found themselves beyond the line of hunters. Hans was for making the best use of their opportunity by escaping up the bed, but Miles resisted. For one thing he was in no humor for running, and for another, if they went up they would be turning their backs to the sea. His mind was actively at work, and presently he had it.

"Hans," he whispered, "the men are now working away from us. Crawl forward and see, if possible, in what direction those who dismounted have gone. Then return to me here. First, can you ride?"

"Better'n walking. I see! My master, we will each take a horse. Goot!"

The Hottentot sank to the ground, and disappeared on his risky business, but it was a task for which from his training as from his size, he was well fitted, and in a short time he was back with the welcome intelligence that there was a cluster of horses a short way off under the charge of two men.

"Now, Hans, we must get away on horseback."

"Ja, sieur."

"The guards must not see us until we

are upon them. Once mounted we must cross the gully and turn to the left for the coast."

Cautiously, step by step, they felt their way, and soon the cluster of horses loomed ahead in a dark patch, with here and there a gleam of white, and they had almost crept up undetected when the horses, keener than the guards, saw the approaching figures, and plunged back on the reins, drawing the men with them.

"Now!" said Miles; and the two leapt forward, each securing the rein of a horse, and bounding to the saddle before the guards knew who were upon them. The other horses broke away and dashed over the plain, making a great noise, which was presently added to by the warning yells of the guards. Taking advantage of the confusion they slipped quietly across the river bed. Their chance of getting away undetected was, however, spoilt by one of the dismounted Arabs suddenly stepping out of the shadow of the far bank, and firing hurriedly. The ball whistled overhead, but the flash of the powder scorched Miles's bridle-hand and startled his horse, which, in a couple of violent bounds, scrambled to the bank. As Hans followed, the Arab made a swinging blow at him with his long sword, but the little man slid round his charger's neck and gave his assailant an upward cut on the sword arm, then climbing back into his high saddle yelled out a few lurid insults in Arabic. This, of course, brought the whole band after them in a reckless charge, howling and firing wildly, as they thundered over the hard ground. They had, however, to pull up when they reached the donga, and when they had crossed the chase was virtually over, for in the darkness they could not pick up the spoor, and the noise of their own making effectually drowned the distant hoofbeats. When finally they halted to listen they could hear nothing.

(To be continued.)

SCOTCH HUMOR.

In the May Arena the Rev. Dr. Andrew D. Cross illustrates the "Humorous Characteristics of the Scot," by means of a series of witty anecdotes, which we reprint:

An old story about Dr. Johnson seems to show that Englishmen are unappreciative:

"When that uncultured cynic, Johnson, was dining with a bright Scots-woman (and the adjective is almost superfluous), he was politely asked how he liked the haggis. 'Good enough food for hogs,' was his ungracious response. 'Do let me help you to some more, Mr. Johnson,' sweetly insinuated the hostess. Dr. Johnson never could understand Scottish humor."

Sydney Smith declared that it would take a surgical operation to inoculate a joke into a Scotsman's head, and Max O'Rell says that Smith probably meant an English joke.

"Scotsmen are sometimes very funny when they joke, but some of these grim old sons of the Covenant are even more humorous when they pray. In an old volume, published in Edinburgh in 1693, entitled 'Scottish Presbyterian Eloquence,' is to be found the following notice: 'Mr. Areskin prayed in the Iron Kirk last year, "Lord, have mercy on all fools an' idiots, and particular on the magistrates of Edinburgh."

"The humor of Scotland is by no means confined to the pulpit, though it finds its ablest exponents there. That canny Scot had a very keen sense of the fitness of things who, when asked if he had ever been in a court of justice, replied, 'No, but I've been before the judge.' The ever-apparent tendency to tangle up sanctimoniousness with business was well illustrated by the shopkeeper who advertised, 'We trust in the Lord; all others cash.'

"It would appear from the illustrations cited that Caledonia has a dry humor, with qualities which are peculiar to it; and the surgical operation referred to by the witty Englishman seems to have been performed at a peculiarly early date, and the law of heredity proved supernaturally true.

"The bright mot of Campbell, the poet, has no especial Scottish characteristic, but having been perpetrated by a renowned Scotsman, with it we may appropriately conclude. Campbell, it may be remembered, is the author of 'Hohenlinden,' which begins:

"'On Linden when the sun was low,
All bloodless lay the untrodden snow,
And dark as winter was the flow
Of Iser rolling rapidly.'

"The poet attended an evening party on one occasion, and when the gentle-

men were securing their hats and coats previous to departure, suddenly the lights went out. In the confusion which followed some one pushed vigorously against Campbell, knocking him downstairs. The offending gentleman at once said, 'Beg pardon! Who's there?' and a voice replied from the depth below, 'It is I, sir, rolling rapidly.'

HUMOR OF THE WAR.

The following, taken from the Baltimore News, is addressed to Admiral Von Diederichs, in command of the German squadron in the Philippines:

Ach, Admiral von Diederichs,
I van to speak mit you;
Yust lisden fer a leedle und
I'll tolly you vot to do;
Sail from dem Philypeanen isles
A thousand miles aboud—
Fer dot Dewey man vill got you
Uf
you
doan'd
watch
ould!

Ach, Admiral von Diederichs,
Der Kaiser vas a peach,
I'm willing to admit id, bud
Dare's udders on der beach.
So, darefore, dot's der reason vy,
Doan'd led your head ged stoud,
Fer dot Dewey man vill got you
Uf
you
doan'd
watch
ould!

Ach, Admiral von Diederichs,
Vy vill be a clams?
Go ged some udder islands vich
Are not old Uncle Sam's.
Yust wrote to Kaiser Wilhelm, yet,
Und dell him dare's no doud,
Fer dot Dewey man vill got you
Uf
you
doan'd
watch
ould!

A dispatch from Bristol, Pa., tells the following: "Let's play Hobson and choke up the channel," said one of several boys in swimming in the canal above Bristol. They did it by rolling an immense rock down into the Delaware Division canal. A coal boat soon came along, struck the boulder and was stuck there all night. There may not be much humor in that paragraph, but there was lots of fun for the boys.

A Kansas volunteer is vastly indignant over an order issued by his commanding officer, which compels the soldiers to bathe their feet once a day. In a letter to his home paper he interprets the order as a reflection upon the personal habits of the Kansas troops and he adds: "I want to tell those West Point dandies that the Kansas soldiers are just as clean as anybody, and that they change their socks as often as Gen. Merritt." That volunteer is determined to stand up for the dignity—and cleanliness of the people of the Sunflower State.

An English journal says: "Admiral Dewey's interruption of the battle of Manila bay to give his crews the opportunity of breaking their fast recalls our own glorious first of June, when Earl Howe, before he gave the French such a hammering off Ushant, hove to for an hour before attacking to permit his men fortifying themselves for the coming fight with a good meal—a pause which caused much conjecture in the minds of the astonished French. It has ever been the Anglo-Saxon way to fight, if possible, on a full stomach. Wellington once said that if ever he wanted an Irish or Scotch regiment to reach a particular point by a certain hour, all he had to do was to promise the former a drink on getting to its destination, the latter its pay; but that the corresponding bait to an English battalion was a good dinner of roast beef." The "iron Duke" evidently understood the leading characteristics of the three elements of which his army was composed.

They sat on the beach, and he had been talking to her very earnestly. Now he was waiting for her to speak. She dug holes in the sand with her parasol and blushed and hesitated. "George," she said at last, "your attack has been almost irresistible, and I feel that I must surrender!"

"Dearest!" he interrupted, and it was evident then that the maneuvering was to be at closer quarters. "Provided," she went on, "that it is understood that I am to be accorded all the honors of war."

"Which are?" he said inquiringly.

"A diamond engagement ring," she replied.

Having agreed to this, the final details of the capitulation were soon settled.—Chicago Post.

HOW A BRITISH EDITOR LOOKS AT THE WAR.

The editor of the National Review, in an article on the Spanish-American war, says:

"It is now clearly seen that the United States completely overmatch Spain in every respect except individual bravery, in which neither nation could be eclipsed by any other. But in resources, ingenuity, numbers, efficiency, thoroughness, and dogged determination to miss no opportunity, there is no comparison between the combatants. Spain never stood an outside chance of serious victory, and she has no prospect of retrieving her position as the war drags on. It may drag on indefinitely, for the American army is only in the raw material stage, and until the finished article is ready the administration will not be so foolhardy as to risk preliminary reverses in Cuba where Spain has a large if a wasted force. It is perhaps conceivable that the Federal army, now being fashioned, may never see active service; for if the responsible people in Spain had their way she would now make overtures for peace on the basis that she keeps her fleet, as well as the Philippines, while surrendering Cuba—the future of Porto Rico to be the subject of negotiation. The advisers of the Queen Regent know that they are engaged on a forlorn hope, from which nothing but calamity can ensue, but they dare not make the first advances for fear of the wrath of the Spanish people, who have been fed with official lies about their army and navy for years past. Should the United States make any peace proposals they would probably be most acceptable to Madrid, and the Spanish politicians would tell their fiery compatriots that America had been so punished in war as to be clamoring for peace, and something might come of it.

"The problem has, however, been tremendously complicated by Commodore Dewey's unforeseen and most brilliant achievement in Manila Bay. The Sagasta government dare not discuss the surrender of the Philippines, at any rate for the present, and so they are endeavoring to excite Europe over these islands. On the other hand, the Americans may ultimately find it as difficult to withdraw their troops from Manila as we have found it to withdraw ours from Egypt. They may say to themselves, 'We cannot allow these islands to relapse into anarchy, especially remembering the glorious event by which we acquired them; it would be immoral to return any colony, once emancipated from Spanish rule, to that hideous dispensation; it would be undignified to hold an auction among the great powers; none could accept them as a gift without the risk of war with others; the only solution is that we make an American Egypt of them.' It will readily be seen how the gallant commodore has shot the problem with difficulties, and while his victory has convinced the Spanish cabinet of the madness of prolonging the war, it has introduced a new element which renders that conviction exceedingly difficult to act on."

TURNING BAYONETS INTO ONION HOES.

"I wish I could pick up the bayonets that have been thrown away around Santiago," said a blacksmith in one of Washington's downtown shops yesterday.

"What earthly good would they do you?" asked a bystander.

"I could make a small fortune out of them," replied the blacksmith, "just as I did once before with the bayonets that were picked up at Antietam and Harper's Ferry."

"How's that?"

"Well, I don't know as it did me any good—leastways it doesn't now that I have lost it all. Perhaps that is the reason that I think I would like to try it again. I was a young man when the war was over, and was living up at a little out-of-the-way place in the mountains of Maryland. I had learned my trade of my father, who fell at Gettysburg, and the world was before me. I settled down to shoeing farm horses and mules, repairing reapers and mowers, and doing odd jobs of all kinds.

Prices were better then than they are now, and the country had some cash in it. I did well and laid by a little capital.

"One day an old fellow living 'way up on the mountain came into my shop

with a bayonet in his hand. On the other arm was a little basket of nice white eggs.

"'Cap,' he said, as he laid the bayonet on the anvil, 'my unyin patch is all gormed up with weeds and filth, an' ef you could on'y jest make me a leetle narrer hoe outeren the bayonet fer this yere mess o' eggs, I reckon I'd hev a right good chance of unyins.'

"I took the bayonet and hit it a tap against the anvil, and it rang like a bell. There was the best of steel in it, and I knew I could make a first-class hoe out of it. I had seen any number of bayonets, army muskets and swords kicking around in that country, but I had never thought of using them for anything before. I stuck the bayonet into the fire, and in a few minutes I made a very pretty little onion hoe for the old man. I cut off about two-thirds of the steel, then bent the rest around nearly square with the ferrule and flattened it out into a nice sharp blade an inch wide. The ferrule I left untouched, so that the hoe handle could be put into it. There happened to be an old handle standing in the corner of the shop, and I put it in for the old man. It hung just right, and made the prettiest garden weapon you ever saw. The old fellow was delighted. A few days later he came in again and told me how the hoe worked. He said it was so light, so thin and so sharp and strong that it was play to hoe onions, something that I had always heard before this was the hardest kind of work.

"What he said set me to thinking. If a bayonet made such a good onion hoe why was there not a field for making them on a large scale? The bayonets were to be had in quantity, and there were people enough raising onions. In a few days a neighbor of the old man came into the shop with a bayonet and said he wanted a hoe made out of it. Several others followed his example in the next month or so and bayonet hoes came to be known and generally used in that region. I put up a notice in several post-offices around there that I would pay five cents apiece for bayonets. They came in by hundreds. In spare time I made them up into hoes, which I finished off as nicely as I knew how. Then I put a little advertisement into the county paper, and finally another in an agricultural paper, and the orders began to pour in on me. I charged 35 cents apiece for the hoes, and as it did not take over five minutes to make one, when I was making them in quantity, I estimated that there was at least 25 cents profit on each hoe. I had no discount to make to the trade. I sold every hoe myself, and got all the profit myself. The trade increased until bayonets began to get scarce, and I had to offer seven, eight and finally ten cents for bayonets, and they were slow to come in at that figure. But for a year or two I sold the hoes by hundreds, and I got very well fixed financially. In my advertisement, of course, I alluded to the biblical notion of beating swords into pruning hooks. This was very fetching with all sorts of good people, and a good many, I suppose, bought my hoes not only because they were a first-class article, but as relics of the war. Some of those bayonets had, no doubt, pierced some poor fellow's vitals, and let his life blood out upon the greenward on the battle-fields of the south. It is good to think that the use I put them to was more peaceful and useful to mankind."

A Farmer's Thresher.

Every farmer who can possibly afford it, should own a thresher, and thus avoid the delay and disappointment so often suffered by those who are compelled to hire their threshing done. A machine that has given unusual satisfaction is the Columbia Thresher, manufactured by the Belle City Mfg. Co., Racine, Wis. Though small, this thresher has a large capacity and does equally as good work as the larger machines, while requiring less power and less help to run it. It has recently been much improved. The Columbia Thresher can be operated by any kind of power—sweep, tread or steam. From six to eight horse power is required according to the work to be done. Two sizes of this machine are made, with 24 and 32 inch cylinders, one size weighing 2,000 lbs., the other 2,300 lbs., complete with all attachments. The Belle City Co. will mail full description and particulars free to anyone that requires it. This company is one of the oldest thresher manufacturers and we are sure they would not put anything upon the market that they could not absolutely guarantee.

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You may need a new one this Spring.
Avoid mistakes and secure the very best thing of the kind made.
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CONDUCTED BY A. C. BIRD.

All correspondence for this department should be addressed to A. C. Bird, Highland, Mich.

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All communications relating to the organization of new clubs should be addressed to C. M. Pierce, Elvira, Mich.

A GOOD SUMMER'S RECORD.

This issue announces the tenth new farmers' club to be organized since June 1st of the present year. The most enthusiastic club worker in the State would scarcely have dared predict so much. With the working part of the year yet to come we may conservatively give assurance that even the splendid record of the past two years is to be surpassed long before the annual convention again meets.

FARMERS IN THE CONVENTIONS.

It is a matter for sincere congratulation that the lists of delegates to the various political nominating conventions, announced from day to day by the press of the State, reveal a very much larger representation of farmers than ever before. This is the direct result of the systematic work of the more than three hundred farmers' clubs of the State in interesting the people in public affairs of State and nation. It indicates that as never before the practical people of this State are determined to take an active hand in the shaping of public policies and the management of public affairs. All honor to the organization which has brought about these results. Such work lends confidence to the future.

THE RECOMMENDATIONS OF SUPERINTENDENT HAMMOND.

In another column will be found sundry quotations from the advance sheets of the annual report of Superintendent of Public Instruction Hammond. The fact that the farmers' clubs of Michigan have taken a deep and loyal interest in the school system of the State leads us to again give considerable space to the consideration of this question.

The Superintendent deserves the support of all honest and fair-minded men for the firm stand he has taken against text-book lobbyists and the growing practice among educationalists of submitting to the dictation of the powerful corporations who control the school text-book publications of the country. There is every evidence that in Michigan the point has been reached where the subtle influence of a great corporation decides whether or not many a superintendent of schools can retain his position or secure a new one. If this be true, the State is indeed fortunate in having a superintendent of public instruction who not only raises his voice officially against the dangerous practice, but who promises to render efficient and vigorous service in ridding the educational system of Michigan of this curse.

The implication in the report that the general application township unit system is a dead issue in this State will be most gratefully read by the farmers of Lower Michigan. But the applause with which this announcement will be greeted ought not for a moment to cause the farmers to forget that "eternal vigilance is the price of liberty," and that with such measures "resurrection" oftentimes camps closely on the trail of "death."

It is to be regretted that the estab-

lishment of another State institution in the Upper Peninsula is championed in this report. Had the Superintendent, who unquestionably has the best interests of the school system of Michigan at heart, but given the matter more thorough investigation, we are convinced he would have learned that the added expense of living in the Upper Peninsula during the taking of a course of normal instruction would more than counterbalance the traveling expenses of the students in going to and returning from the Southern Peninsula institutions already established. This, however, is one of the features of the report upon which the people will be many times heard before action is taken by the Legislature, and we are certain that the practical good sense of the Superintendent will cause him both to discover and frankly admit his error long before that time shall come.

Taken all in all, the report is by far the best document of its kind ever issued by this department, and every person in Michigan who is interested in schools and school work, should give it most careful consideration.

A STRUGGLE AHEAD.

That the County Salaries Bill will meet with the most uncompromising opposition before the next legislature is a foregone conclusion. This measure would strike a death blow at the most flagrant remaining exponent of the iniquitous fee system. Hundreds of men find profit in the existing conditions and are ready to sacrifice both time and money, and all too many of them principle and honor, to retain the system with all its dishonorable practices.

The fee system to-day stands without a champion among the business element of society. No one except a few small politicians who profit or hope to profit thereby, longer raises his voice in its defense. A system once almost universal in its application in the departments of state and national governments, but productive of such flagrant practices and such wholesale dishonesty, that even the politicians of state and national reputation no longer dared to foster it. A system so reputable that every political party has been compelled to declare against its general application, and yet a system which Michigan retains in her county offices for the sole and only reason that legislators have found it more to their interest to heed the threats of the one per cent who derive profit thereby than the demands of the ninety-nine per cent who ask that practical business methods shall be applied to public affairs.

Already are the thrifty and shifty small politicians to whom the fee system means pecuniary profit planning their campaign against the Salaries Bill. Councils have been held all over the state and state conventions have been called for the consideration of the best means of defeating the proposed measure. There will be a state association of sheriffs, a state association of county clerks, and doubtless similar associations of all other interested officials, for the purpose of fighting the monster to the bitter end. These men will adopt every means at their command to defeat the will of the people, and he who discredits their strength will discover his error long before the contest is decided.

Can the people win? Most assuredly, if they will only pull together, loyally and systematically, and most important of all, begin at once. The County Salaries bill of the last session, passed by the House by an overwhelming vote, but held up in committee in the Senate by the same leaders who defied the will of the people throughout the session, affords something tan-

gible to tie to. Every legislative candidate in Michigan should be compelled by the people of his district to unequivocally define his position on this measure.

The measure of itself is eminently fair and practical. It has received the endorsement of every Farmers' Club and very Grange, and indeed of practically every business man in Michigan. It has been strongly discussed and has stood the test of critical examination. It provides simply that county officers shall be paid a stated salary commensurate with the work actually performed, this salary to be fixed by the respective boards of supervisors, and that all fees collected shall be turned into the county treasury.

This plan has been in practical operation in several states, notably New York, for many years, and county taxation has thereby been decreased in those states by hundreds of thousands of dollars. That Michigan, the home of three hundred Farmers' Clubs and nearly as many Granges, a state in which public questions are regularly and deliberately discussed by a larger percentage of its population than any other state in the Union, should retain a system so universally cast off and abolished because of its flagrant abuses, is not only inexcusable but absolutely incomprehensible.

How do your candidates for the Legislature stand on this question?

SHIAWASSEE COUNTY ASSOCIATION OF FARMERS' CLUBS.

Any one familiar with the work and purposes of the State Association of Farmers' Clubs does not need to be informed of the immense amount of good that can be and is accomplished by the work of this organization. In some respects it is possible that its work in the past has not resulted in the degree of success that might have been wished, yet, in the aggregate, it has been amply demonstrated that its accomplishments are as yet only in their beginning. None conversant with the work and the purposes which it was organized to pursue will dispute its invaluable worth to the farming community at large.

On the same general lines the clubs of this county have formed themselves into an organization to aim to do the same work and accomplish the same results, only on a smaller scale, or, in short, to endeavor to do in the county what the State Association is bound to accomplish in State affairs—to deal with matters that are strictly local, and which the State Association can not properly reach. For instance, it is believed by many that there are serious abuses in the manner of local distribution of taxation that are not to the best interests of the people at large, and that steps should be taken towards a suitable re-adjustment; in every county there are probably certain measures adopted by the Board of Supervisors that are not perfectly in harmony with the wishes of many; it may be that there are certain matters that are contemplated more as a means of paying off political obligations than as something consistent with the best public good, or, it may be that there are a certain small minority that have it in their power by a peculiar combination of circumstances to misconstrue and divert public wishes for purely selfish ends. The above may be a few of those evils that exist in Shiawassee; others will present themselves in due season that will require some good governing power for correction. After the social features, the sole and only aim of the County Association lies in this one direction.

It is the intention of the various clubs that the affairs of the Association shall be conducted by a board of directors, acting in conjunction with the president and secretary of the Association, one of which is to be elected by each of the several clubs from among their own members. Semi-annual meetings will be held in the spring and fall. At these meetings it will be the aim of the society to discuss and act on different questions, so far as it is possible in accord with the wishes of the majority of the clubs regarding any stand that they may desire to assume on questions of local interest. This movement will, of course, include

questions wherein it is believed that there is need of reform, and so far as possible, will be what is deemed for the greatest good to the greatest number.

It seems to be an opinion among many that it is one of the features of the State Association to interest itself in matters that are in themselves strictly local—that an attempt should be made by that body to remedy evils that are confined to one particular community, and which, consequently, interest but a very small number of those that are connected with the State Association of Farmers' Clubs. A little careful thought will make it only too plain that such an idea is very erroneous, and impractical to the extreme. Were such an effort to be made it would necessitate that the officers of our State Association keep themselves thoroughly posted in regard to the grievances of each particular locality, and be prepared to provide the remedy therefor. Obviously, considering that many of these grievances may be either real or supposed, such a task would be an almost endless one, in fact, far too impractical for serious consideration. If any localities exist, and there are doubtless many of them, where it is believed that some good can be accomplished in this direction, then the thing most needed is a county organization of farmers' clubs for the purpose of correcting the difficulties, and others that may present themselves. Such an organization will have the very important advantage of being situated in the midst of the evil, and being directly interested in its solution to say nothing of having at hand the very best of material to work upon.

One of the most important and commendable features of the county organization is the advantage that it offers along social lines. It will endeavor to cover much the same ground, save on a much smaller scale, that is characteristic of the State Association. Perhaps, one might say, uniting the whole county in one club, differing only in its increased size and ability to do. To further this end it is necessary that meetings of some kind be held in which all clubbers throughout the county will take part, and with this object in view it has been decided that this year the first meeting is to take the form of a picnic, which will be held the latter part of August. The minor part on the program will be furnished by the local clubs, each being expected to furnish, or be prepared to furnish, one number, providing the contribution is needed. The major portion will be from outside talent. The writer is informed that our esteemed editor, Mr. Bird, has very kindly consented to be present that day. It is also hoped and expected that Governor Pingree will also be in attendance. Every effort is being made by those having the matter in charge to make the meeting a success, and there is every reason to believe that the fullest expectation will be realized. The meeting will be held in Caledonia Park, situated midway between Owosso and Corunna, and connected with both cities by an electric line.

An effort is being made to have all who are interested to take part in the enjoyments of the day; not only all club people but their friends as well. In short, any one who is so disposed to attend is most cordially invited to do so. It is believed that by making the invitation general and, if possible, securing the attendance of those who are not actively familiar with the work of the clubs that much good can be accomplished towards furthering the club movement.

C. P. REYNOLDS.

FROM ANNUAL REPORT OF SUPERINTENDENT HAMMOND.

TEXT-BOOK LOBBYISTS.

Unpleasant as it may be, it becomes my duty as a representative of the educational interests of Michigan to speak out plainly concerning these individuals. In doing so I recognize fully the right of all persons doing business in the State to be represented in legislative committee rooms by persons who are qualified to speak in their behalf. If this is a government by the whole people, then the interests of corporations and stock companies are just as sacred as the interests of the humble mechanic who buys food, clothing, and school supplies for his children.

There has been much said in recent times concerning the influence of legislative boodlers and bribers. I am not prepared to say that any man who has appeared as a lobbyist on the text-

book question is either a boodler or a briber. I can say, however, that the great army of honest, earnest, and conscientious men and women who are the school teachers and officers of the State, has been imposed upon by men who, having held state offices and thereby gained some influence, come to legislative halls with hypocrisy and deceit, declaring with sanctimonious cant, to use their own words, "we pay our own railroad and hotel bills;" also that they were working without pay in "protecting the interests of the boys and girls of Michigan."

One of these men, elected by the people of the State, a man who had taken his oath to support the Constitution and obey the laws of the Commonwealth, was, while holding that office, an agent of publishers of text-books in strict violation of the laws of the State, and it was noticeable that these men were able to remain about the capitol and the Lansing hotels for days and weeks "in the interests of the boys and girls," and that they were always present to oppose text-book measures at committee meeting or wherever legislators were assembled. I have no positive information that these men were employed by any particular book firm; there are some persons who profess to know by whom they were employed and what they were paid.

When it became evident that their work in the legislature was having the opposite effect from what was intended, they sought to introduce amendments into the law that would destroy its value to the people. I have always questioned the wisdom of such a law. I have fears that it is not a step in the right direction; yet there is nothing more evident to me than the fact that the time has come when superintendents, teachers, and school officers should face this question fearlessly, not relying on publishers and book lobbyists for their information. If the assertions made by those interested in text-book profits are true, namely, that many educators in Michigan are indebted to book agents for their positions, it is time the manhood and womanhood of all the educational workers of the State should assert itself for merit and integrity.

TOWNSHIP UNIT SYSTEM.

It has been a matter of very much regret to me that an overwhelming majority of the persons who are most interested in the rural schools have been so unalterably opposed to this system. I also regret that a large body of enthusiastic teachers of the State have not been more conservative in their recommendations concerning this change. There has been much discussion and many unfair representations made, on both sides of this question. In my term of service of four years as deputy in this department I had occasion to learn very well just what the feeling has been throughout the State. I have stated, and again state, that no measure originating from the department office, having in mind a radical change in the school system, shall be introduced or even encouraged during my administration. I am of the opinion, if Michigan had been organized in the early days by making the township the unit for school purposes, that the rural schools would have kept pace with the advancement made in other schools. I do not believe, however, that a radical change from the single district system to the township unit system would now be wise. Speaking personally, and not for the great number of school teachers of Michigan, I will say that I think the best plan is to work along all lines calculated to strengthen the rural schools under the laws that we have.

I conclude by saying that the reference here made to this subject is the only recommendation that will be made by me, by circular or by published report. During my entire administration I shall recommend to the legislature no change in our laws on this point, and shall not agitate the question favorably or otherwise. The people in their own good time must determine it.

A NEW NORMAL SCHOOL.

In this connection I desire to mention a matter that is of great importance to the people of Northern Michigan, viz., the establishment of a new Normal School where the teachers of this and other counties may obtain a better preparation for their work. Many a son and daughter of the Upper Peninsula farmer would gladly go to a normal school, were it not for the great distance to be traveled.

APPORTIONMENT OF PUBLIC MONEY.
I desire to call the attention of the State Legislature and the friends of education generally to what seems to me an unjust way of apportioning primary school money. There are in the State of Michigan, according to the reports filed in September 1897, 701,244 pupils of school age; according to the same reports only 491,812 attended school. I would suggest that a proper amendment be made to our constitution and laws which shall provide for the distribution of public money to all of the pupils who attend school at least five months during the school year.

SCHOOL LIBRARIES.

I am pleased to make mention of the addition of 31,486 books to our district libraries during the year just past.

I believe the district library to be of much more value to the people than the township library, and would recommend the enactment of such laws and amendments to the Constitution as shall prevent the use of fine moneys for anything except the purchase of library books.

REPORTS FROM LOCAL CLUBS.

A NEW CLUB.

A farmers' club was organized July 4th, at the home of A. Craig. The second meeting was at the home of Mr. and Mrs. A. Hess, with a large increase of membership. All are well pleased with the club thus far. Will meet at the home of Mr. and Mrs. Robert C. Day on September 1st. The club will be known as the Le Roy and Rose Lake Farmers' Club. We have only had two meetings, yet at the last meeting there were forty-five present.

MRS. S. DAY, Cor. Sec.

OAK GROVE FARMERS' CLUB.

Another successful meeting of this club was held at the home of Pres. F. Kay. After the usual opening exercises the regular program was disposed of. A paper by Mrs. E. Wickling on "Some of the Trials of Being a Woman," conveyed the idea that such trials are in reality few, assuredly so when she has plenty of money and ambition to reinforce her determination. The greatest trial for a farmer's wife is at "chore time" when the good man of the house is away and the hired man skips and leaves the woman with horses and hogs to feed and cows to milk. Trials are what we make them and every back is fitted for its burden, no matter how great or small.

"The Bright Side of Farm Life From Woman's Point of View," by Mrs. Winnie, gave expression to the following thoughts: It takes the poet to write the bright side. When a woman gets three meals a day for 365 days of the year, of meat, potatoes and dessert, with dish washing and the many other requirements thrown in, the bright side fades away.

The question box brought out the thoughts that it pays to attend farmers' clubs, that all laws for the destruction of noxious weeds should be rigidly enforced, and that it never pays to burn straw. Meet with Mr. and Mrs. G. Winnie, Aug. 18.

Shiawassee Co. COR. SEC.

MAPLE RIVER FARMERS' CLUB.

The last monthly meeting was held at the home of Association President and Mrs. E. J. Cook, July 28th. The Association question: "The Farmers' Duty Regarding the Nomination, Election and the Influence of the Members of the Legislature," was presented by Mr. E. J. Cook, who said: "We should exert an influence not in proportion to the number of votes that we cast, nor in accordance with the taxes that we pay, but to an extent that we are able to do so, and directly in the course of right. Many farmers are not fitted to properly influence our legislators, for want of a proper understanding of various questions; it should be our first duty to properly fit ourselves. Our first aim in influencing our Legislature should be in the selection of the proper men; ability and integrity should be their qualifications. A man's vocation should play but a minor part; his inclination to serve the interests of his constituents properly should be considered only. We should aim to select men who will represent us and are not what may be termed professional 'office-holders.' Hudson Sheldon: "The average member goes to the legislature with the firm determination of doing what is right. We must aim to select a man who thinks as we do, and then we can reasonably expect that he will act as we wish him to do. One of the prime factors in influencing our legislators is to turn out to the caucus and see that the right men are sup-

ported, even if we do not get out to election. A. A. Chandler: "We should by all means get out to caucus. Political 'swapping' is not a good thing, but an existing evil. The farmer is the only interest that does not have an active lobby at the Legislature to see that our representatives properly carry out our wishes. If we do not look out for our own interests we can not expect others to do it for us. Senator H. S. Hadsall: "Nominate capable and honest men. To properly represent rural interests as a legislator, does not necessarily mean that he must be a farmer. The legislator should be in sympathy with you." The officers elected for the second half of the year are as follows: President, Theron Gladden; vice-president, Ira Snyder; chaplain, Mrs. M. H. Seeley; secretary, Miss Ottie M. Cook; reporter to Farmer, C. P. Reynolds. The next meeting of the club will be held with Mr. and Mrs. S. R. Cook, August 25th.

Shiawassee Co. C. P. REYNOLDS.
THE MANCELONA AND CUSTER FARMERS' CLUB.

The June meeting of our club was with Mr. and Mrs. Swackhamer. New officers were elected: Y. T. Swan, president; Mrs. Miller, vice-president; James Argo, secretary; Mrs. Wilkes, treasurer; E. D. Elder, corresponding secretary. There was speaking and singing; also, a temperance speech by Guy Swan. The July meeting was held at Mr. and Mrs. Hubbard's. Although an unusually busy time, there were forty-eight present. The subject, "The Taxation of the Railroads" was discussed. It was thought by all to be a very important subject. All favored it, and it will also be the subject for the next meeting. The young people are taking an active interest in all our club proceedings. All left with a feeling that they had had a very enjoyable time. August meeting with Mr. and Mrs. E. D. Elder.

Antrim Co. E. D. ELDER, Cor. Sec.
ARGONAUT CLUB.

At the August meeting the discussion of the Association question brought out the following argument: J. F. Dunham: If we nominate men who pledge themselves to support the bills reducing taxation, yet can they always be depended upon. We are creatures of circumstances and we know not what may be brought to bear upon a man's judgment four months hence." J. Richardson: "If a man pledge himself here, he may not pledge himself there also and for opposing aims. U. A. Tibbits: "Farmers in proportion to capital invested are paying a large share of the taxes; would nominate men who will favor the bills that meet the requirements of the farmer." J. Hazen: "Nominate a man who is not seeking the office; pick up a good man at the convention, one that has not been mentioned as a possible nominee. Men for three months have been working for the nominations; these are looking for the honors and for what there is in the office."

Oakland Co. COR. SEC. Y.

LIBERTY FARMERS' CLUB.

At the June meeting which was entertained by Mrs. Mary E. West at her beautiful home, "Lake Side," the topic discussed was "The Farmers' Duty Regarding the Temperance Question." The following resolutions were adopted as expressing the sentiment of those present: "Resolved, That we, the members of the Liberty Farmers'

Club, are in favor of the enactment and enforcement of a prohibitory law forbidding the manufacture, selling or using of any spirituous liquors, or other intoxicating drinks, except for medicinal and mechanical purposes. Resolved, That until such a law can be enacted by village, city, town, county, state or nation, we favor the most stringent regulation in the use of ardent spirits that can secure a majority vote. Resolved, That until the passage of a more stringent law can be secured, we favor the strictest enforcement of the present liquor laws." R. D. M. Edwards, Mrs. J. D. Crispell, J. D. Crispell, committee.

The August meeting will be at Eagle Point, Clark's Lake, Jackson Co. MRS. J. D. CRISPELL, Reporter.

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• 10:40 pm Toronto, Buffalo, New York.
Arrive
• 9:40 am Niagara Falls, Buffalo
• 2:00 pm Buffalo, New York
• 6:00 pm Chatham, London, etc.
• 9:15 pm Toronto, Buffalo, New York.
• 1:30 pm London accommodation.
• 19:05 pm

EAST VIA PORT HURON.
Leave
• 6:35 am Saginaw, Muskegon, G. Rapids
• 9:15 am Pontiac Suburban
• 2:05 pm Gd. Rapids, Gd. Haven, Chicago
• 11:10 pm Saginaw, G. Haven, Milwaukee
• 4:05 pm Pontiac Suburban
• 5:45 am Chillicothe
• 8:40 pm Chicago via Durand (sleeper)
• 8:50 pm Mixed Gd. Rapids Int. stations
Arrive
• 9:20 pm Saginaw, Muskegon, G. Rapids
• 1:55 pm Pontiac Suburban
• 3:40 pm Gd. Rapids, Gd. Haven, Chicago
• 11:50 pm Saginaw, G. Haven, Milwaukee
• 8:10 am Pontiac Suburban
• 7:05 am Chicago via Durand (sleeper)
• 7:05 am Mixed Gd. Rapids Int. stations
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In answer to a correspondent, the N. Y. Tribune gives the following history of who first suggested the use of the greenback:

Colonel Edmond Dick Taylor has the credit of suggesting the plan of issuing greenbacks, at a time when the government's credit with Europe was exhausted, when the treasury was empty and the soldiers were clamoring for money. Lincoln, in a letter to Colonel Taylor, published after the latter's death in 1891, gives this account of the origin of the scheme:

My Dear Colonel Dick: I have long determined to make public the origin of the greenback, and tell the world that it is of Dick Taylor's creation. You had always been friendly to me, and when troublous times fell on us, and my shoulders, though broad and willing, were weak, and myself surrounded by such circumstances and such people that I knew not whom to trust, then said I in my extremity, "I will send for Colonel Taylor; he will know what to do." I think it was in January, 1862, on or about the 16th, that I did so. You came, and I said to you:

"What can we do?"

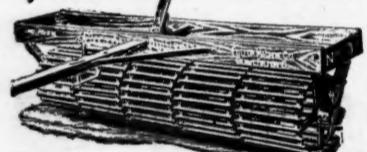
Said you: "Why, issue treasury notes bearing no interest, printed on the best banking paper. Issue enough to pay off army expenses, and declare it legal tender."

Chase thought it a hazardous thing, but finally accomplished it, and gave to the people of this Republic the greatest blessing they ever had—their own paper to pay their own debts.

It is due to you, the father of the present greenback, that the people should know it, and I take great pleasure in making it known. How many times have I laughed at you telling me plainly that I was too lazy to be anything but a lawyer!

Yours truly,
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